

ARCHITECTURE DEPARTMENT

CHINESE UNIVERSITY OF HONG KONG

MASTER OF ARCHITECTURE PROGRAMME

2004-2005

DESIGN REPORT

DWELLING IN THE NATURE

SHUM Hoi Chun

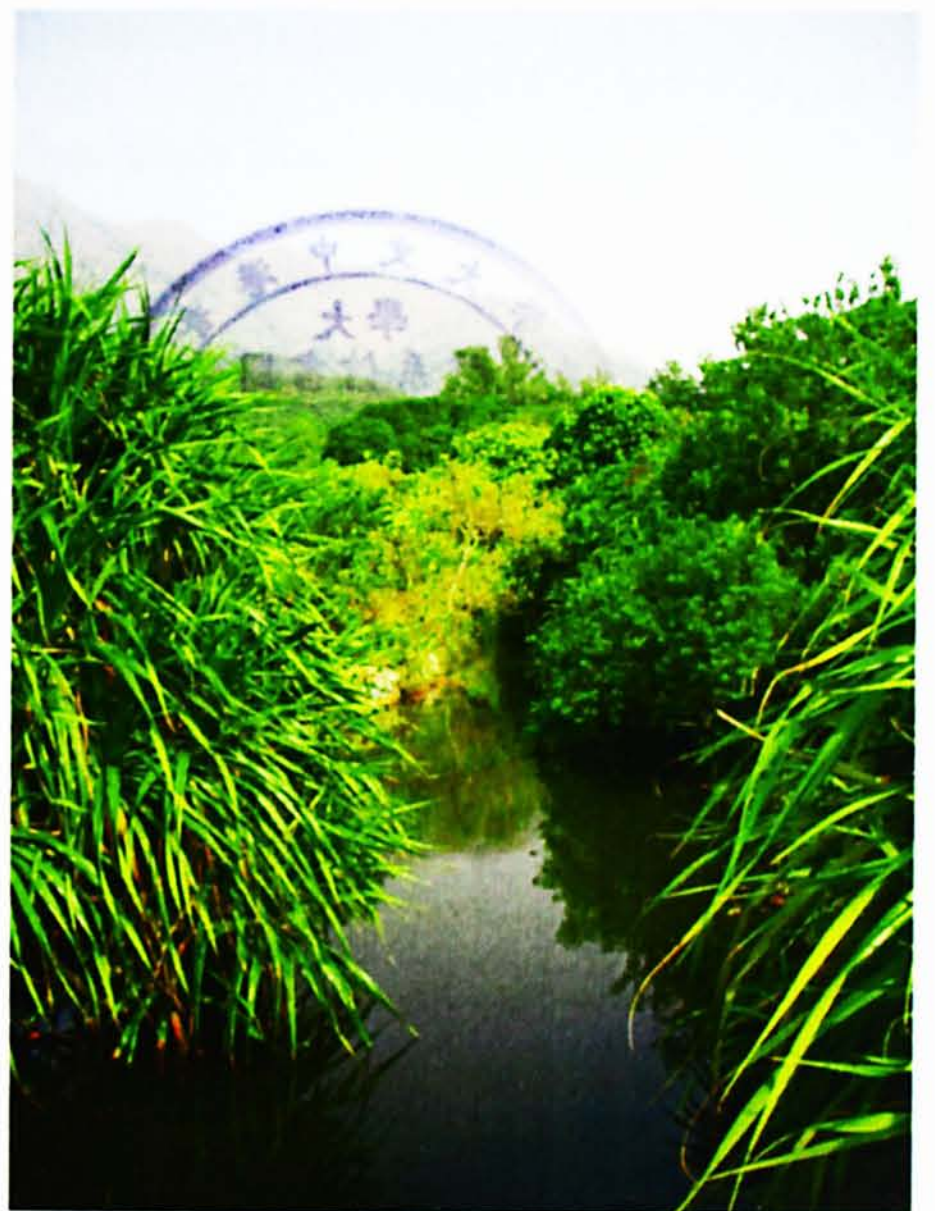
May 2005

The Chinese University of Hong Kong
Architecture Department

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Design Report

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Shum Hoi Chun

Graduate in May 2005



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Part 1

Preface

Dwelling in Nature



Hong Lok Yuen

Hong Kong is known of her hilly and natural terrain. There is about one-third of the land is flat land while the remaining are hills at different height. As the city is being developed, the flat lands are almost used up for living and working spaces. And the city development with no choice extends to the “boundary”, the nature.

Since the beginning of the 20th century, the land of Hong Kong are being used and developed. A large proportion of the land is being reshaped and transformed from the natural environment into a new and well developed area. Undoubtedly, these buildings standing on the hills, the farm cause a great impact to the nature. The demand of living spaces and the continuous developments created a lot of small urban communities along the “rural” hillside and the harbour side. These small communities not only occupying the spaces but at the same time changed the overall outlook of the city a lot. Although the buildings are just next to the nature, their bulk form and tower design do not encourage the residents to contact and enjoy the nature in human scale.

Thesis Statement

Thesis Statement



Fairview Park

The thesis is going to investigate the relationship between the sloping landform, the natural landscape, and the architecture for dwelling. It aims to explore design ideas and design attitudes on how to create a medium size urban community on a sloping land for people to live, while the original landform is respected and the natural landscape is preserved.

The thesis targets to employ design possibilities for the new urban developments in the nature, especially on sloping lands. It not only aims to investigate the architectural ideas to develop the nature with residential use for a certain amount of population for residential use, but with a further goal to respect the original landform, preserve the existing landscape and keep the overall outlook of the mountain as much as possible. The scope of the study is to take a balance between the need of dwelling and the preservation of the nature. And from a broader view, it is trying to resolve the virtual straggle between the "City" and the "Nature" from a very basic need for living of human beings.

Thesis Objectives

Setup a new community in the nature where the group of residence could enjoy the original nature and the introduced second nature in a comfortable way through different experience.

Enhance the natural “green” feature of the land by the combination of different garden concepts. (i.e. preservation of the natural elements under the selective removal concept; introduction of second green pattern to the land)

Create a new urban tectonic language into the architecture by regenerate the natural organic pattern and the locate village architectural form.

Resolve the discontinuous between the villages by introduction of Village Path and Garden Path.

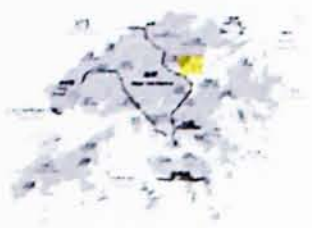
Research Studies

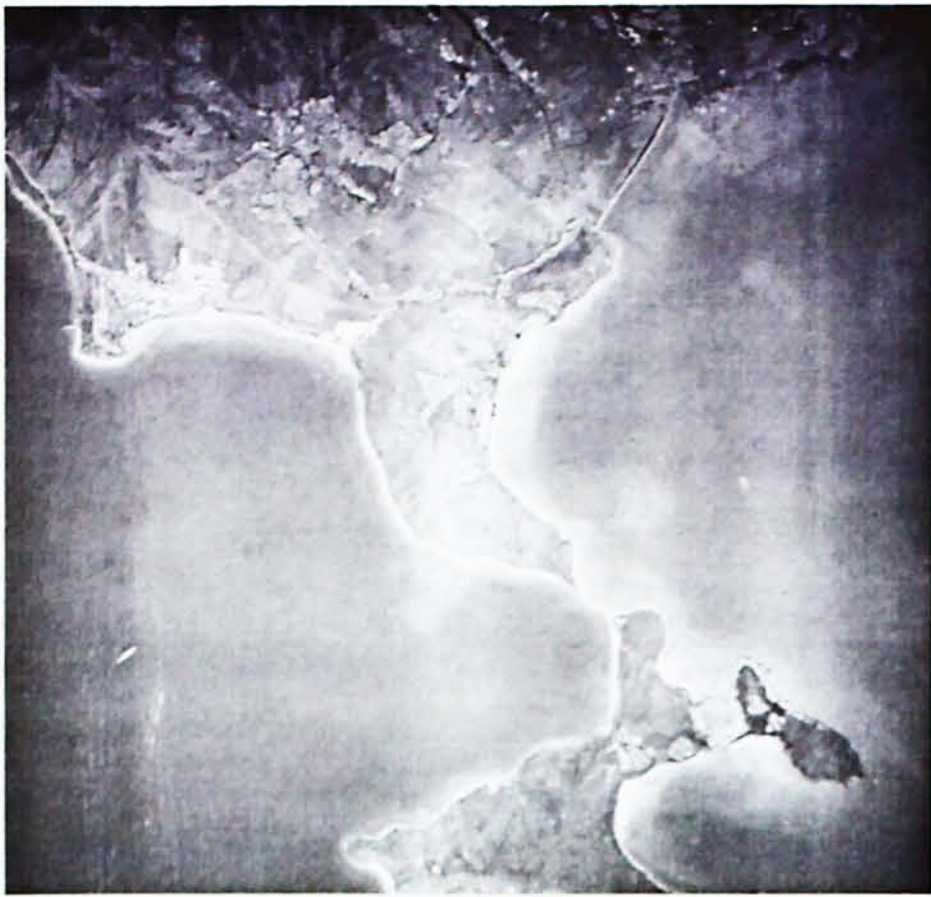
Local Case Studies

The Beverly Hills

The project is located at Tai Po, New Territories of Hong Kong. It is mainly in residential use and there are more than 100 individual houses in the site with a bulky clubhouse in the center of the site.

The development occupied the whole area of the site and which has a plot ratio of 2. The density of the development is too high that the planning and the design of the houses destroyed most of the original form of nature in the site.





1950

1993

2004



The Beverly Hills, Tai Po

Aerial Photos showing the change of the land from “green” into “grey”.



The Beverly Hills, Tai Po

The land was totally reformed during the construction stage.



The Beverly Hills, Tai Po

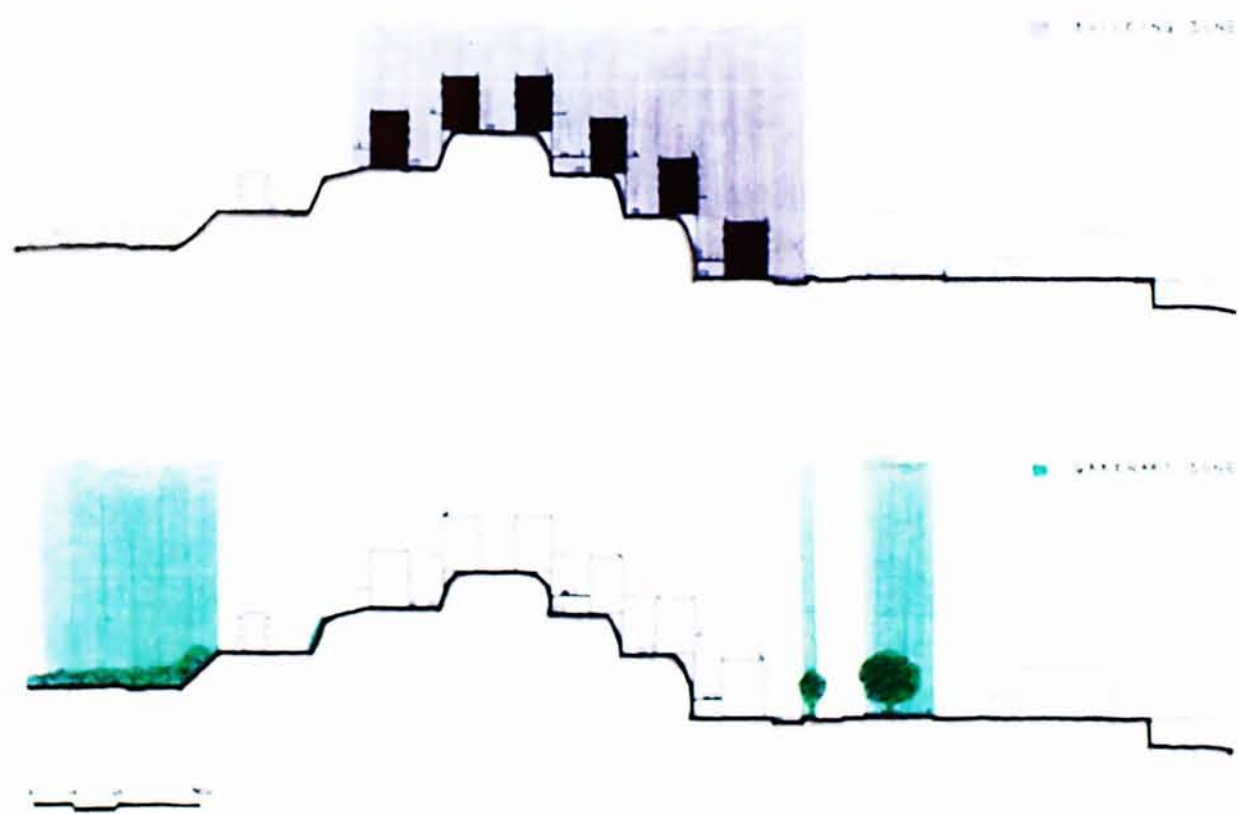
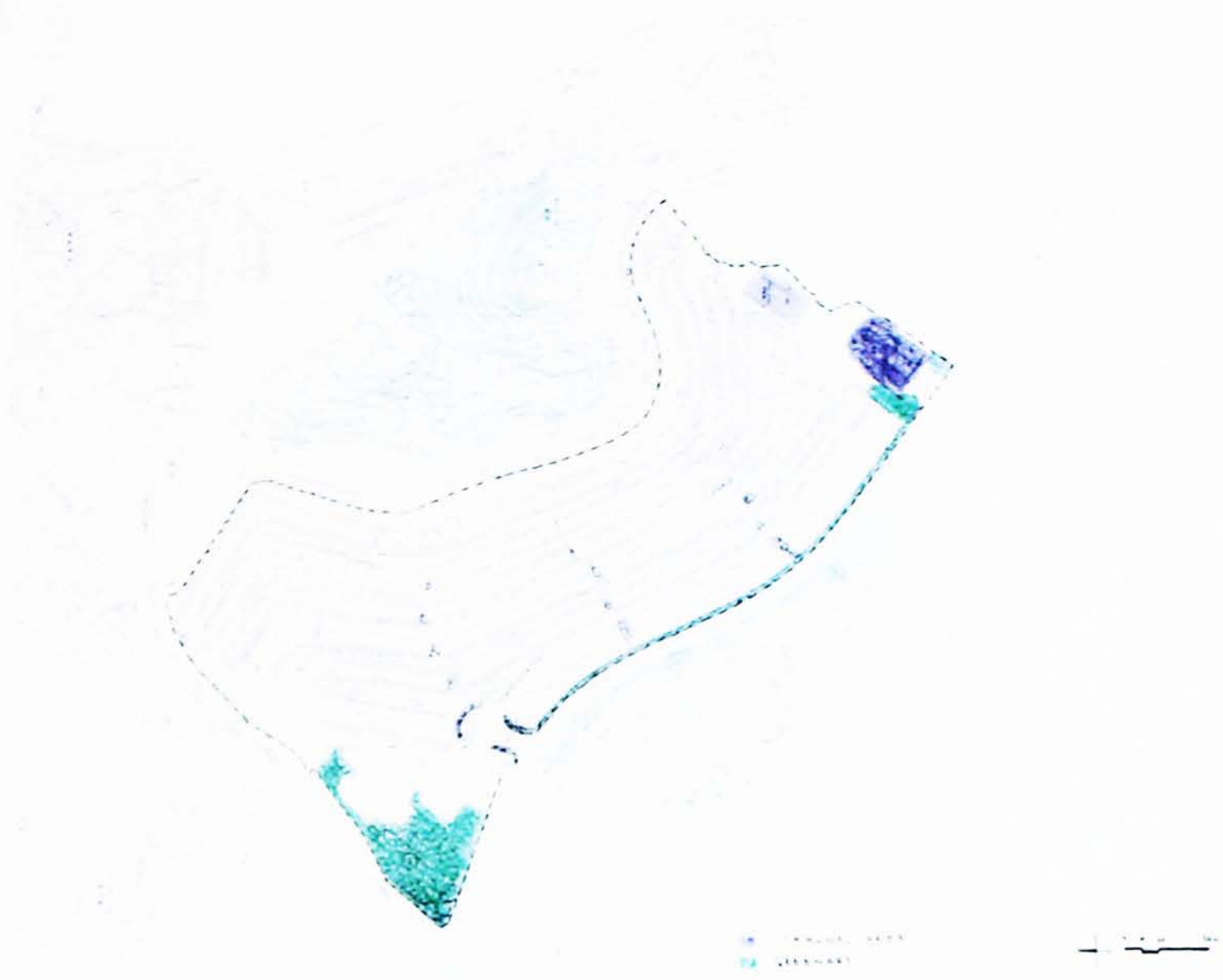
The design is mainly focused on the view from the interior towards the sea.



The Beverly Hills, Tai Po

- Block Plan

- Road System



The Beverly Hills, Tai Po

- Greenary and Public Space

- Building Zone and Green Zone



Local Case Studies

Kwun Mun Fishermen Village

The project is located on a sloping land in Sai Kwun. It was a government development with 30 no. of houses connected as a whole complex.

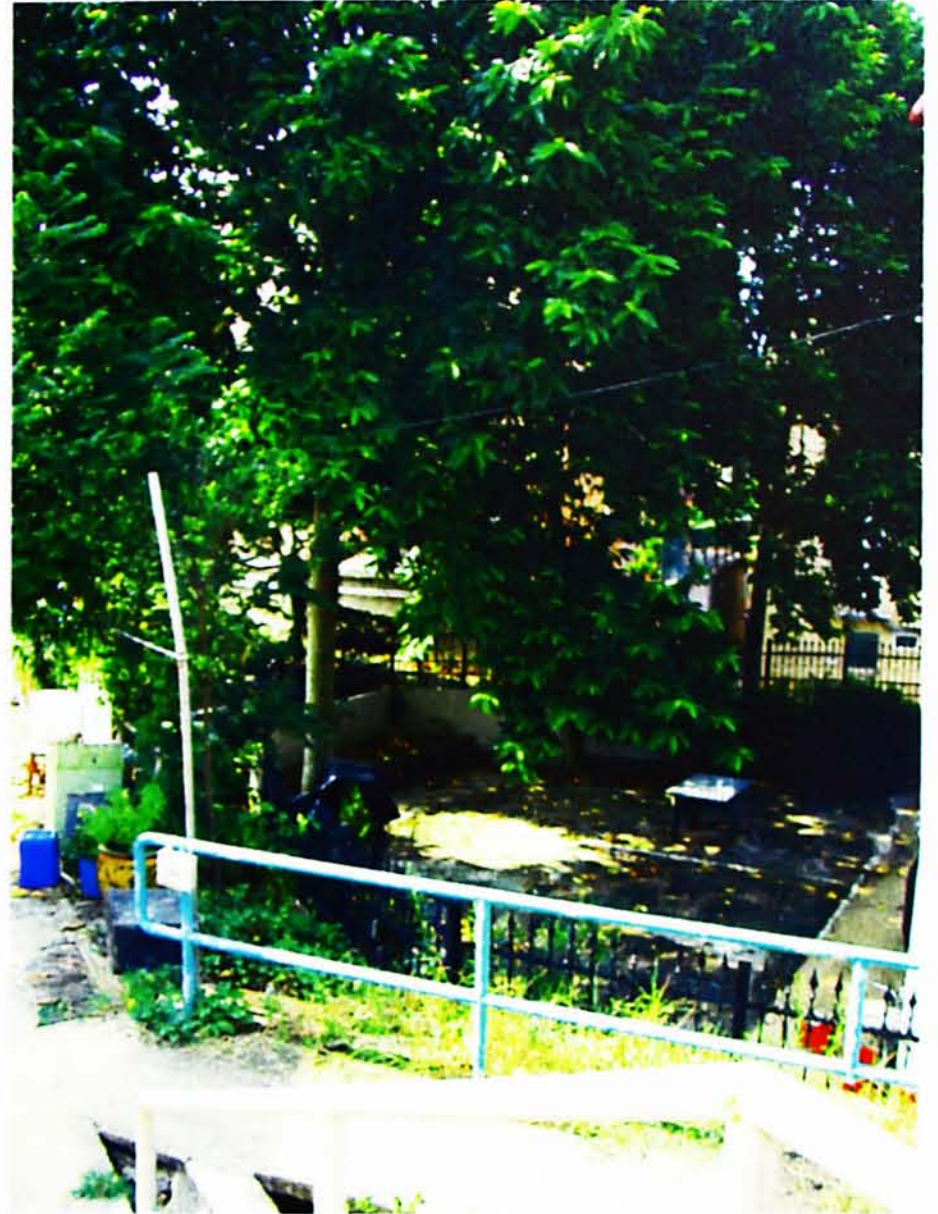
The planning and design of the houses are site specific. And there are a hierarchy of public spaces within the houses. Private, semi-private, semi-public and public spaces are defined in the site for enhancing the communal activities in the area. This important issue formed the bases of the design consideration.





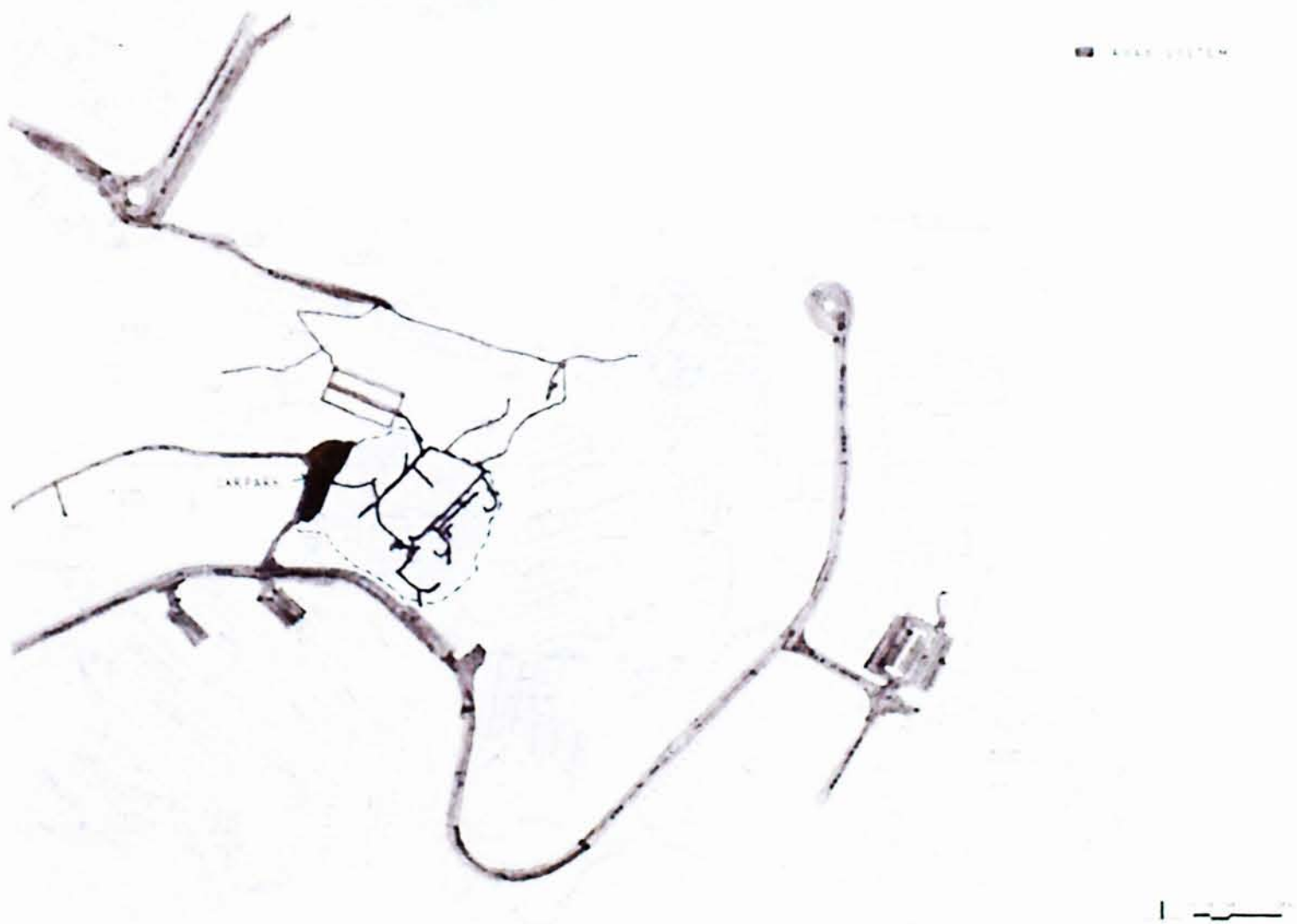
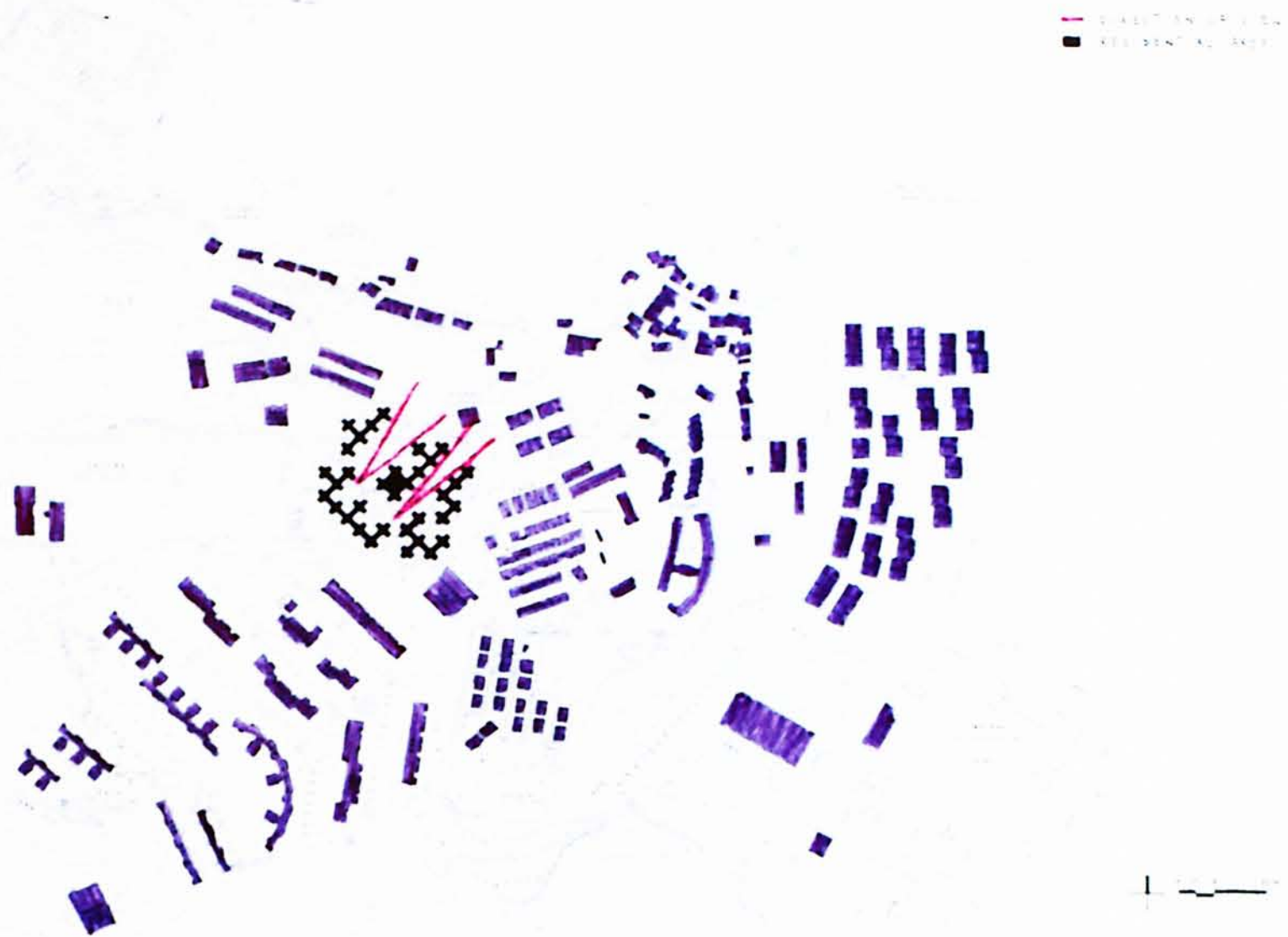
Kwun Mun Fishermen

Aerial Photo of the village



Kwun Mun Fishermen

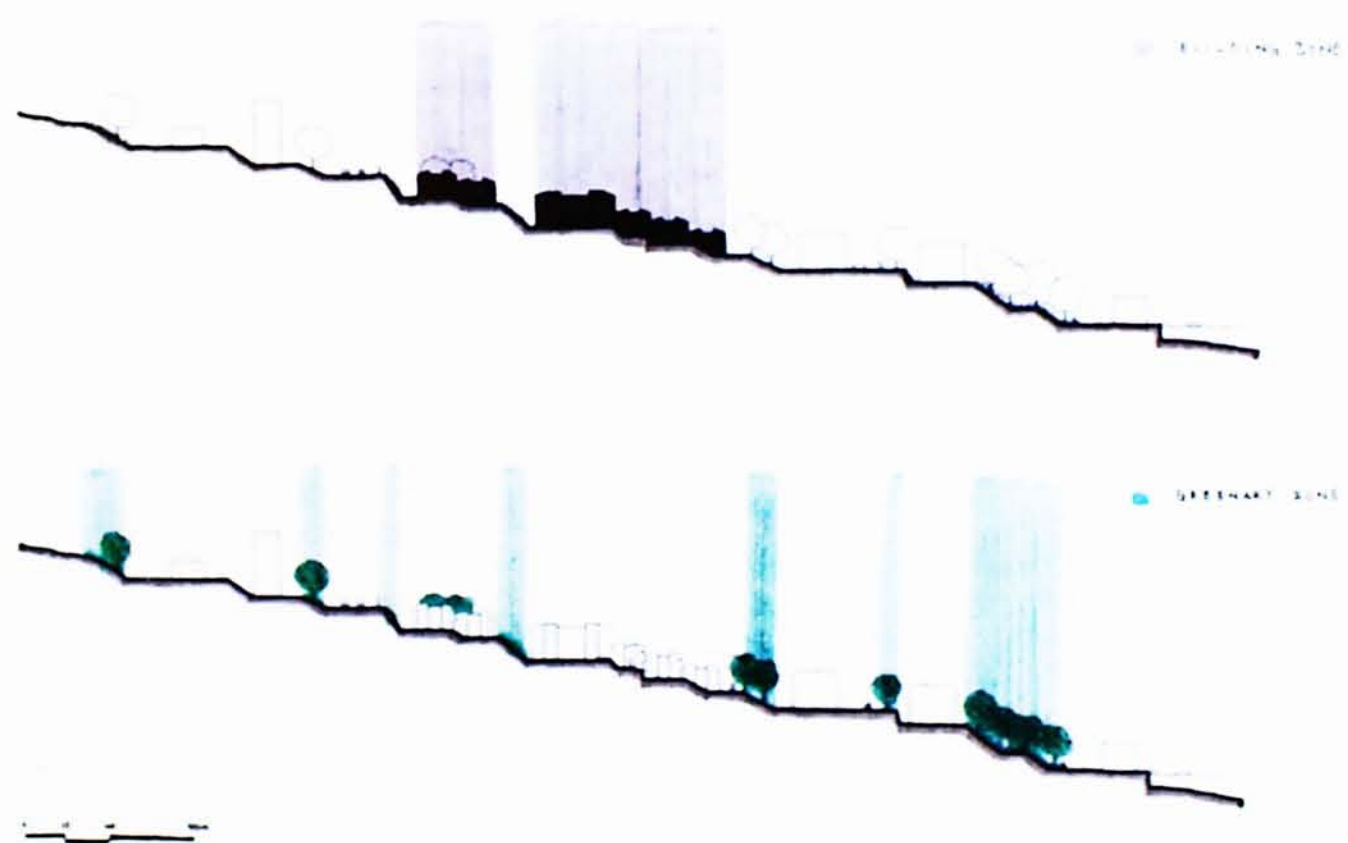
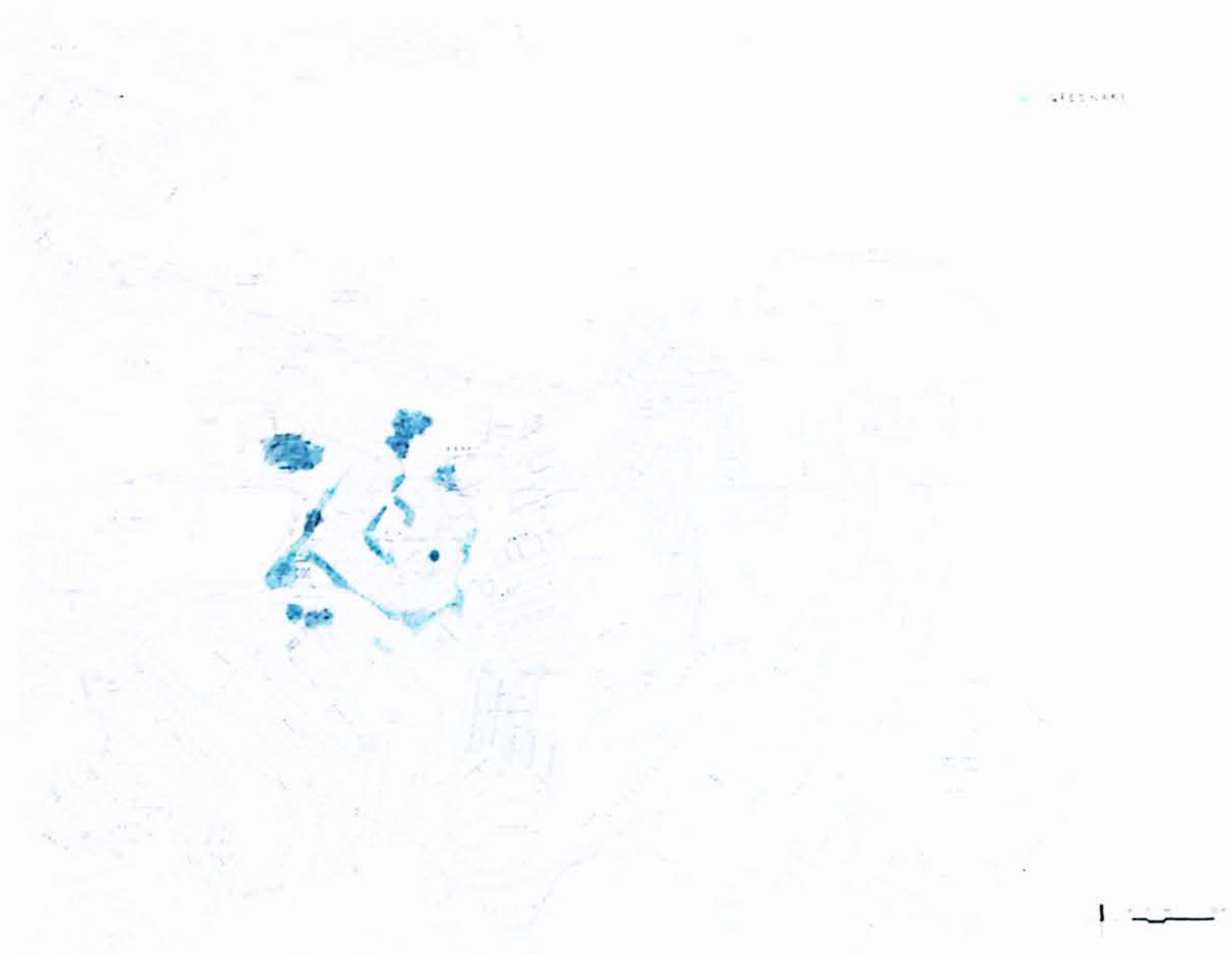
Site photos showing the hierarchy of communal spaces.



Kwun Mun Fishermen

- Block Plan

- Road System



The Beverly Hills, Tai Po

- Greenary and Public Space
- Building Zone and Green Zone

Local Case Studies

Other examples

Le Palais



The Red Hill



Repulse Bay Road

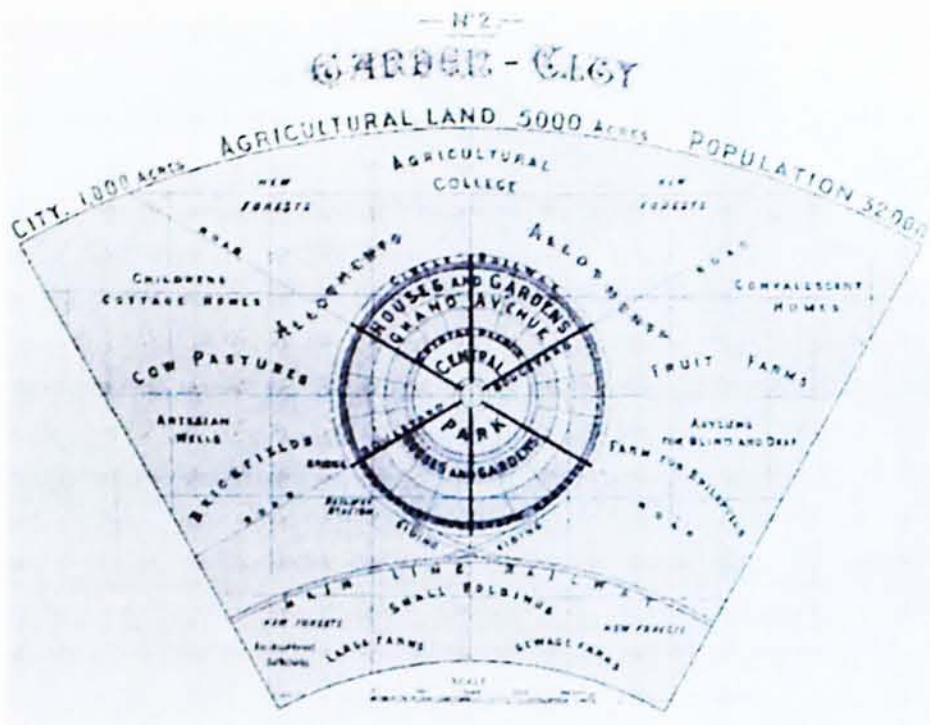


Foreign Case Studies

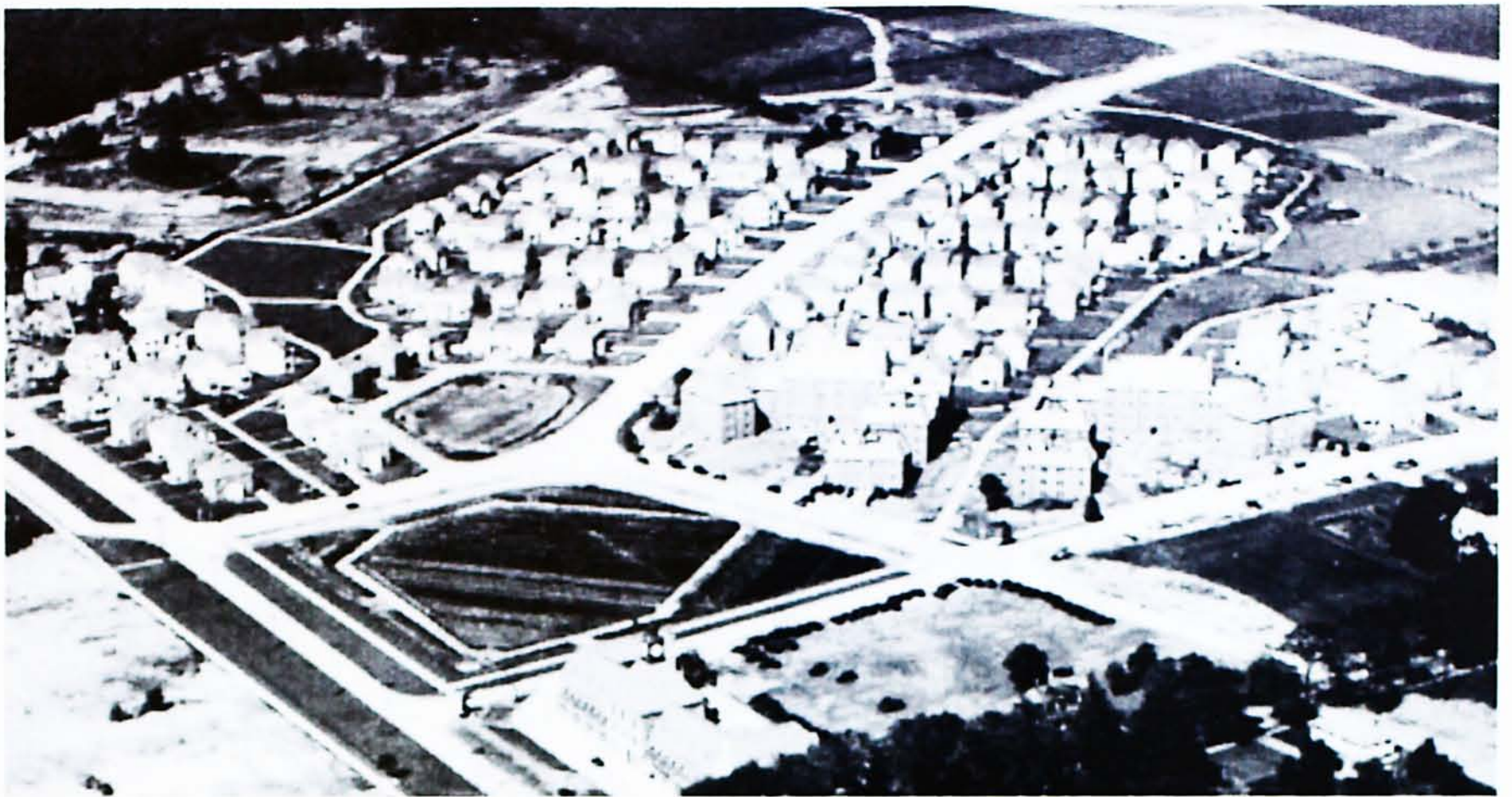
Garden City

Garden City concept was first introduced by Ebenezer Howard. He proposed an alternative to the overgrown and congested industrial city and the depressed depopulated countryside at the early 20th century.

In his Garden City concept, he proposed that all the citizens should enjoy the best qualities of town and country life. The designer and planner should aim to provide Beauty of Nature; Field and Parks of easy access; Pure air and water; bright house and gardens; no smoke and no slum in the Garden City.

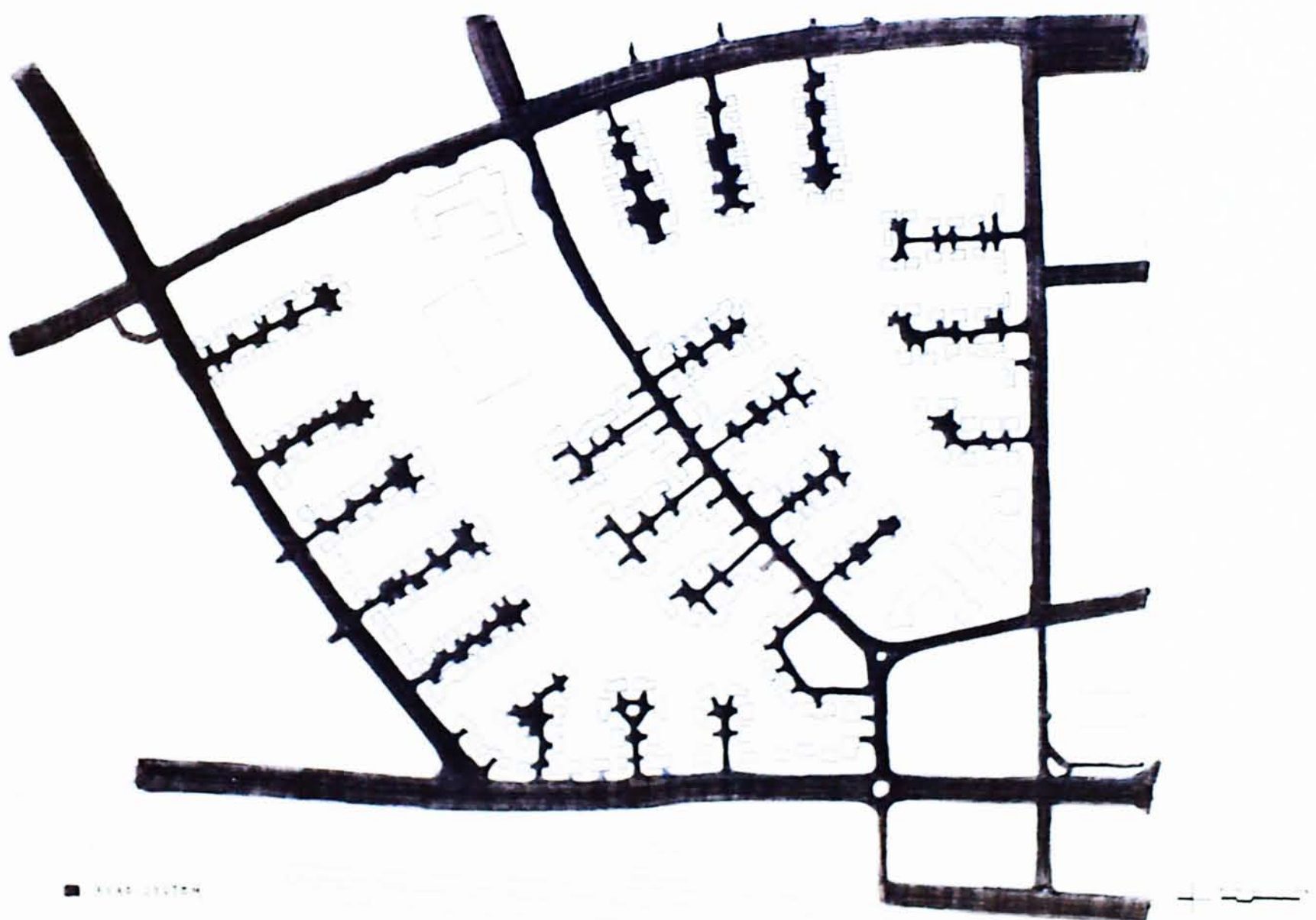
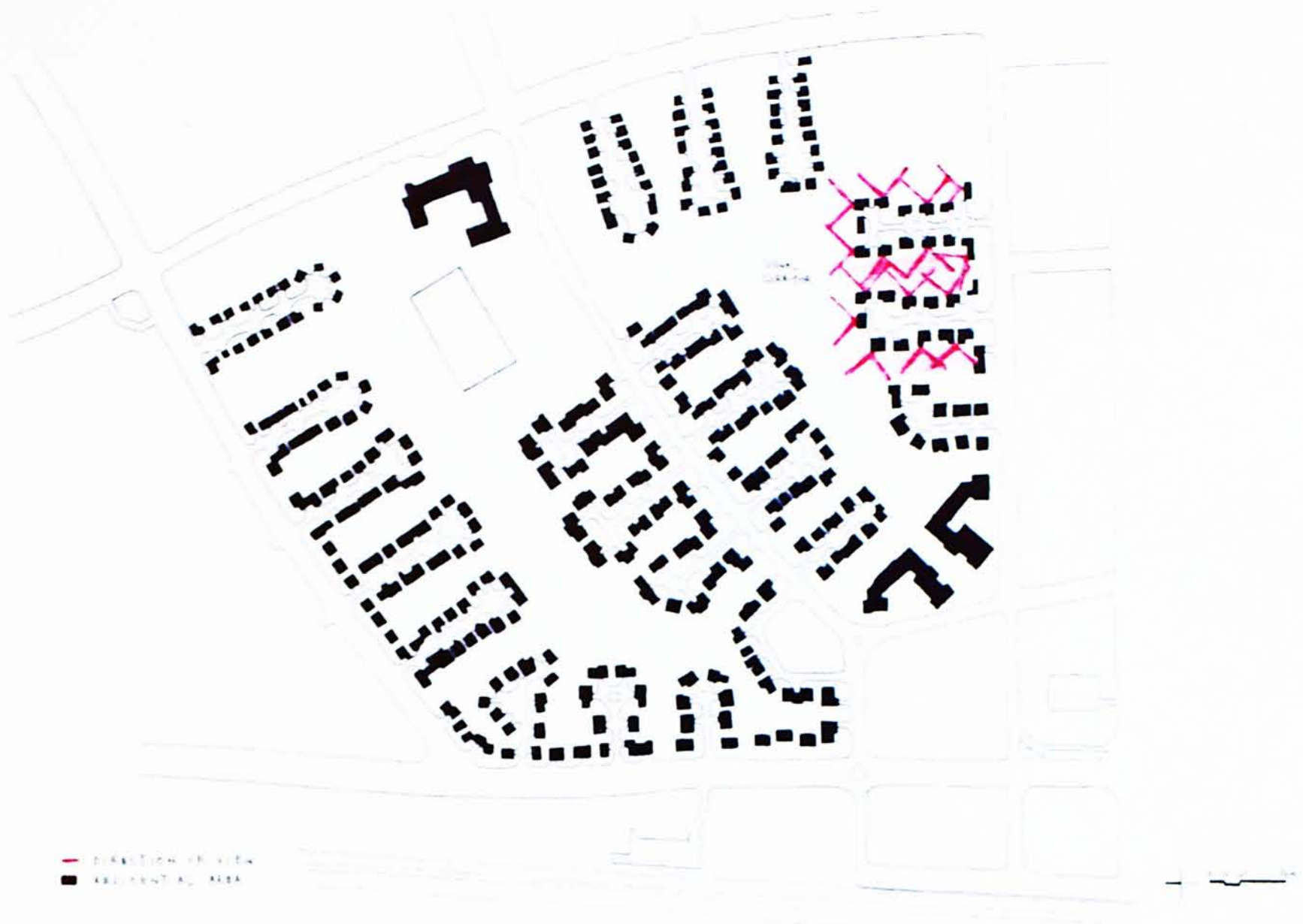


Garden City Theory by Ebenezer Howard



The Garden City, Radburn

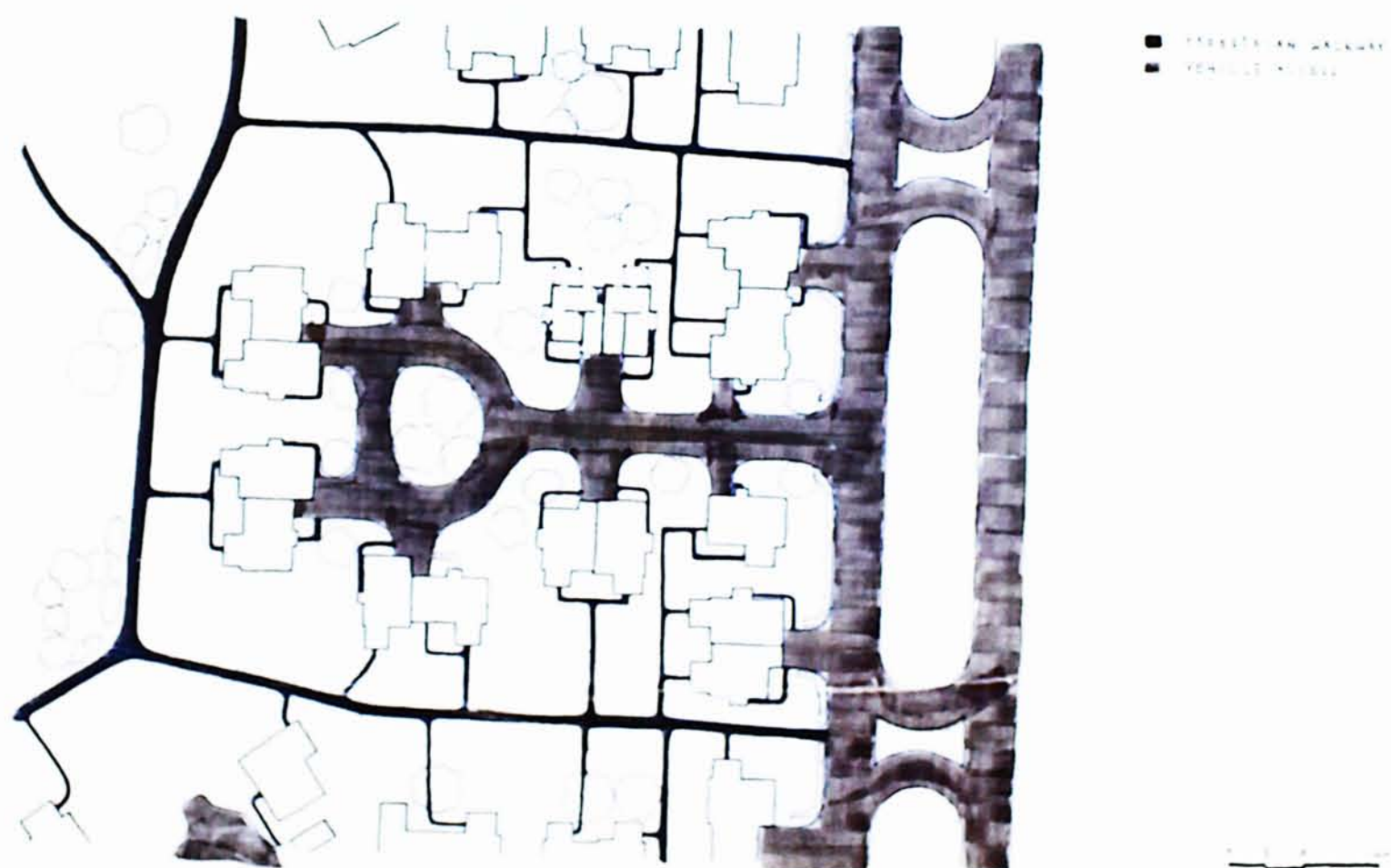
Images of the Garden City
Radburn



The Garden City, Radburn

- Block Plan

- Road System



The Garden City, Radburn

- Greenary and Public Space
- Building Zone and Green Zone

Foreign Case Studies

The Sea Ranch



Sea Ranch is a place along the Coastal Line of the California State. The project Sea Ranch was a planning concept for the ideal life at the Sea Ranch by Sir Lawrence Halprin.

The Basic idea of the concept has to do with some notion :

- People are there in order to *relate to the wild and natural environment* – its incredible rhythms & focus – the sounds of the water, the great views up and down coast.
- These should be preserved as much as possible and particularly along the coast line the edge - allowing access trails along the coast & into the coves.
- People should be encouraged to perceive the difference between the architecture & gardens of suburban 'ranch style' typical subdivision houses & other types more appropriate to sea ranch & the North coast – which is buffeted by winter storms, often isolated, cold and damp often.
- etc



The Sea Ranch, USA

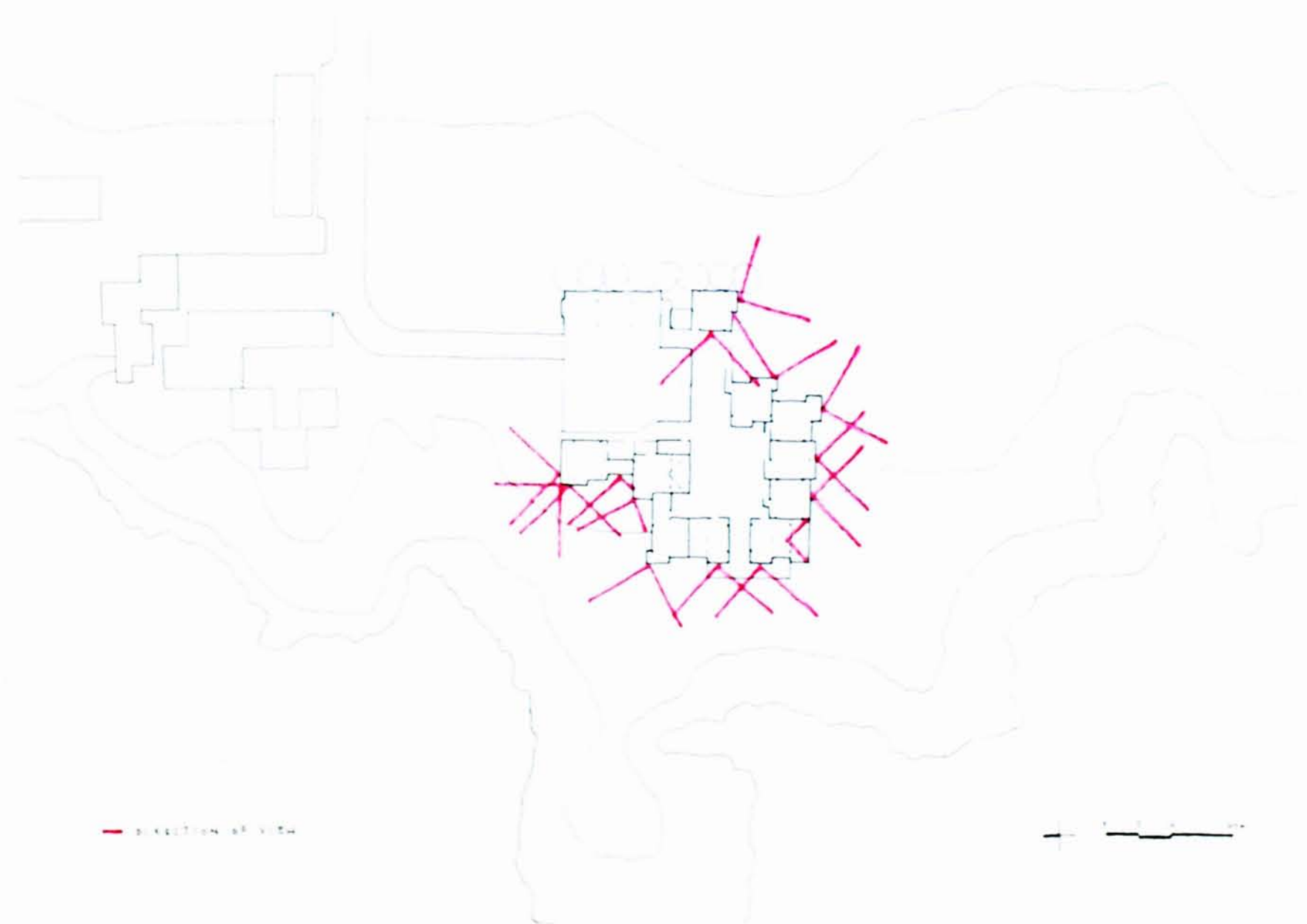
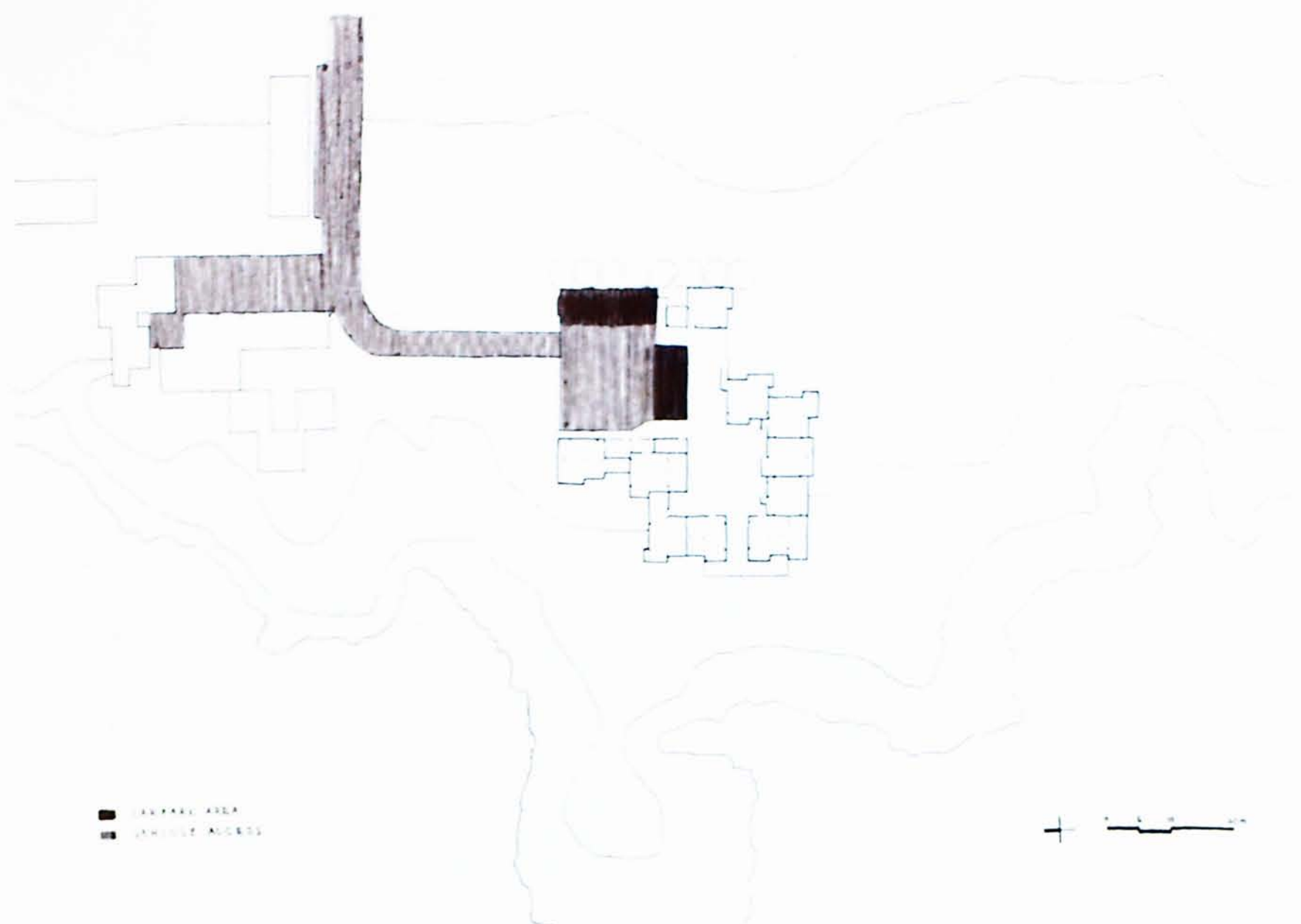
- Buildings are designed into
condominium form



The Sea Ranch, USA

- Planning of the Condominium

- Condominium One , designed by
Charles Moore



The Sea Ranch, USA

- Access of Condominium One

- View from Condominium One

Foreign Case Studies

Chilmark Residence



Chilmark residence is a small residential project in the USA.

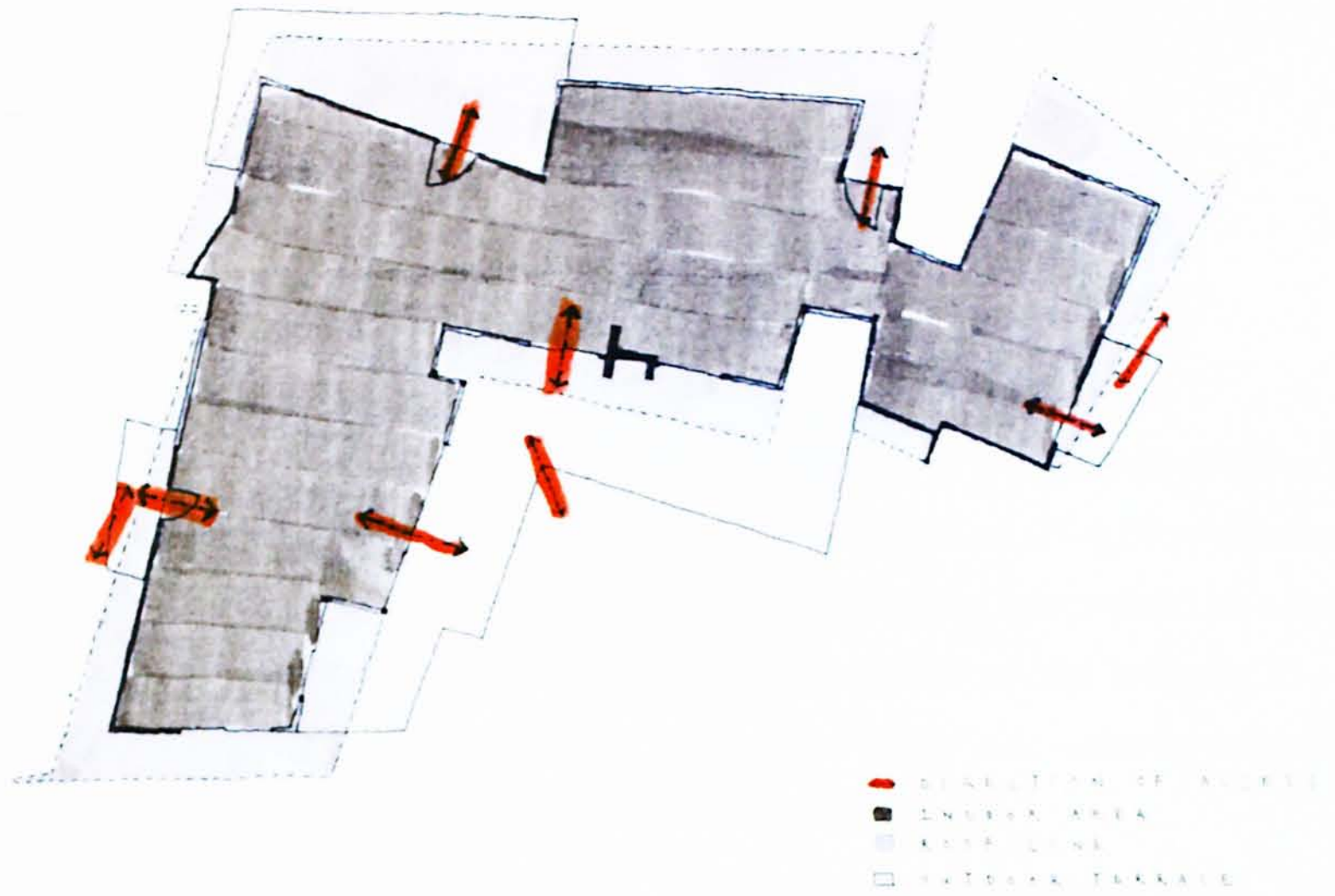
It is a single house project in the forest, which the design aimed to relate the human living with the unique natural environment in the district.

The interior spatial coordination; and the relationship between the interior and exterior become the major focus of the design study.



Chilmark Residence, USA

Close contact between
interior and exterior



Chilmark Residence, USA

- Accessibility from Interior to Exterior

- Spatial arrangement of the design

Foreign Case Studies

House Party

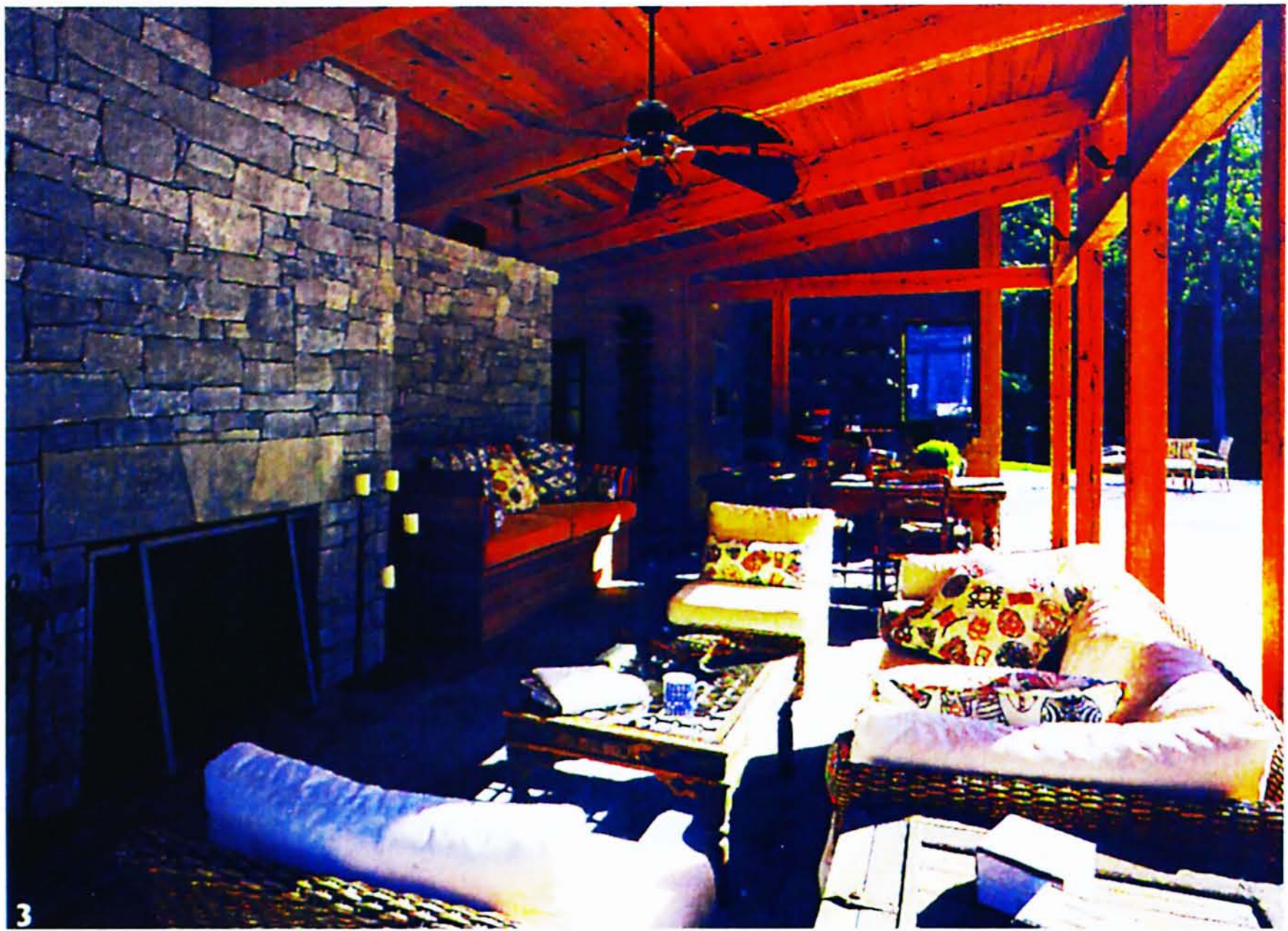
House Party is a small residential project in the West Virginia. The development was composed by integration of several small units into a whole. It aimed to relate the interior and exterior with a different dimension.

The houses are integrated like a “Party”. The constant changing orientation give change to expose the view from the interior to exterior in different direction. This not only increases the vision enjoyment, but also create some interesting spaces within the houses.



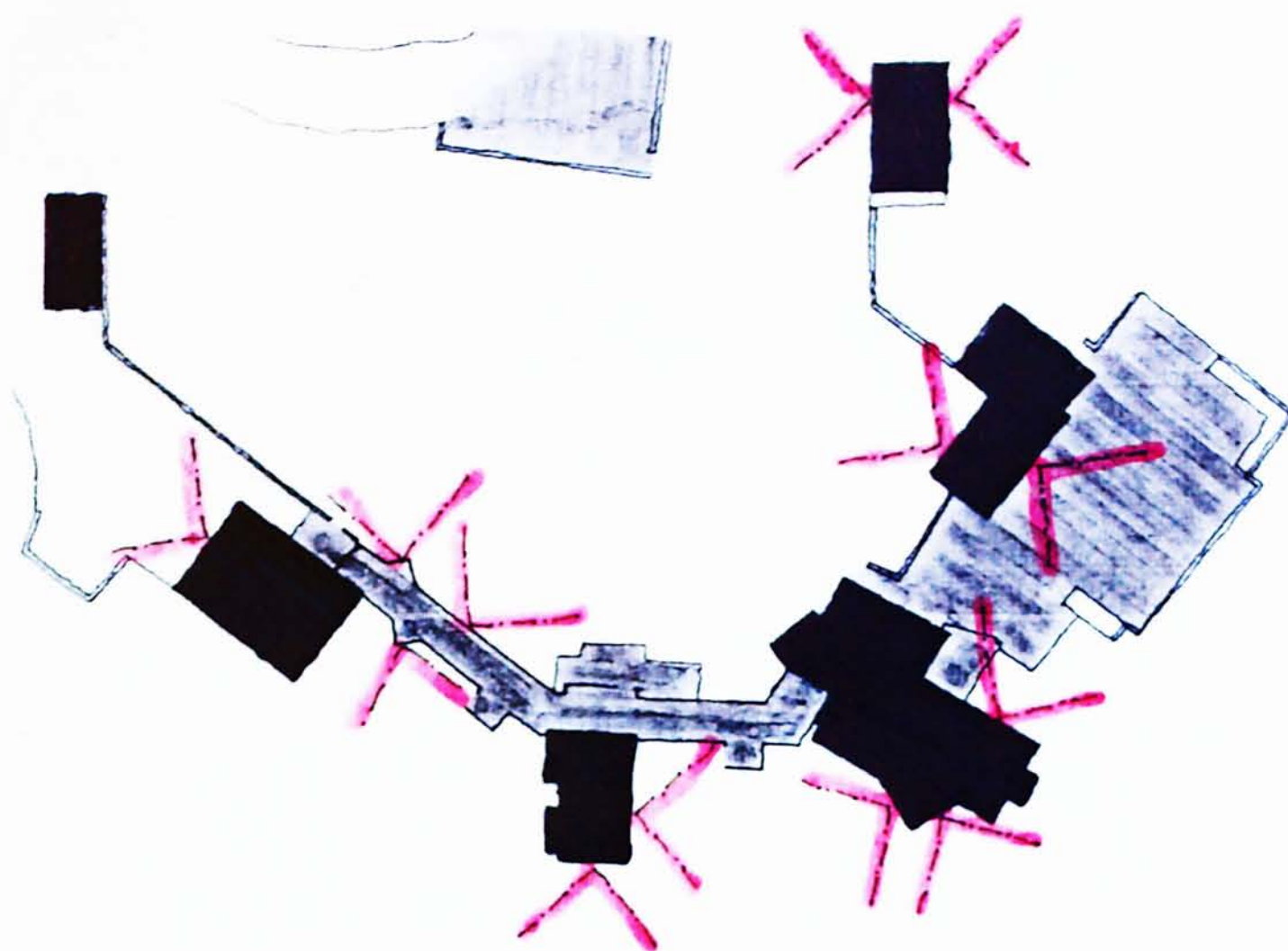
House Party, West Virginia, USA

Images of the House Party

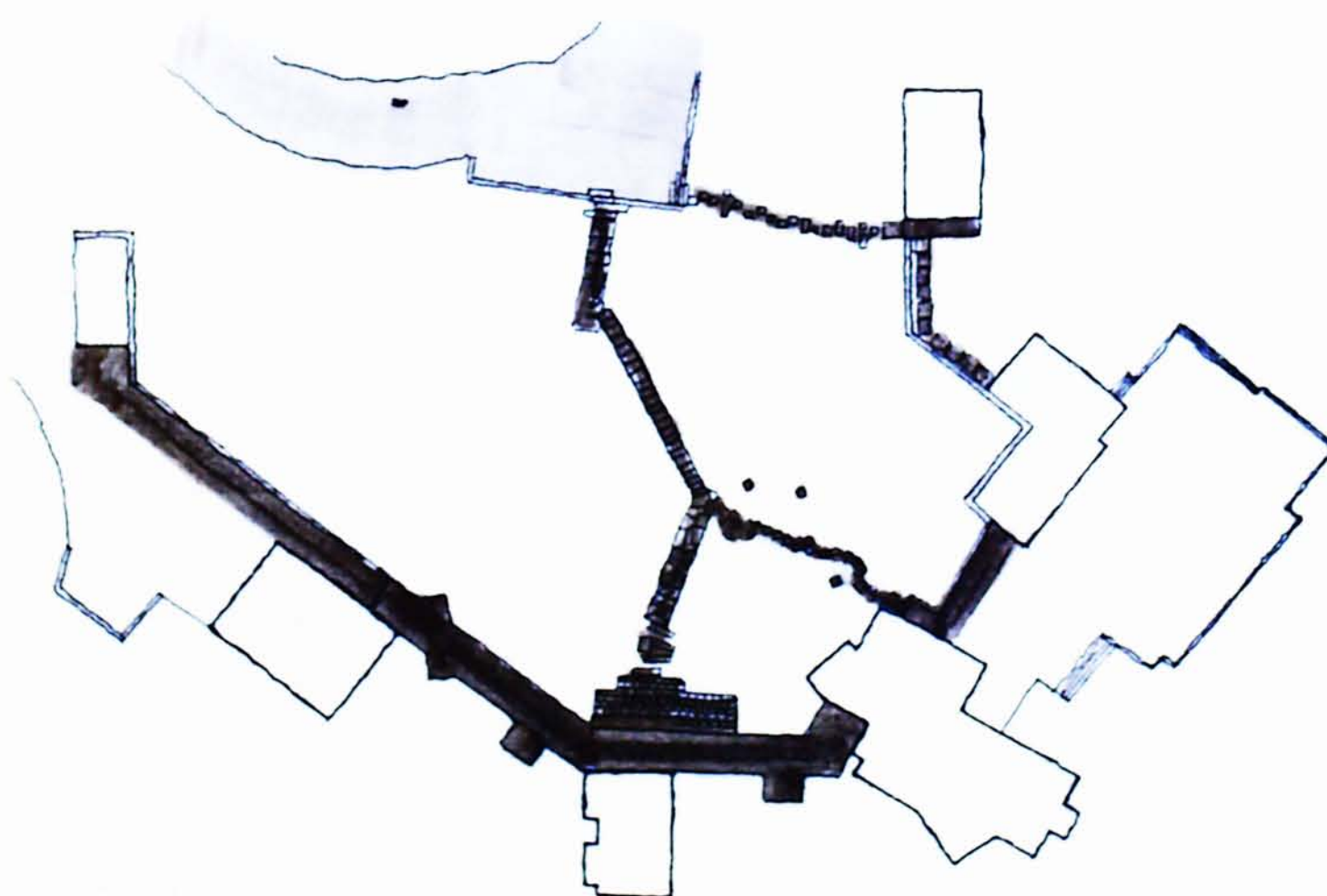


House Party, West Virginia, USA

Images of the House Party



--- DIRECTION OF VIEW



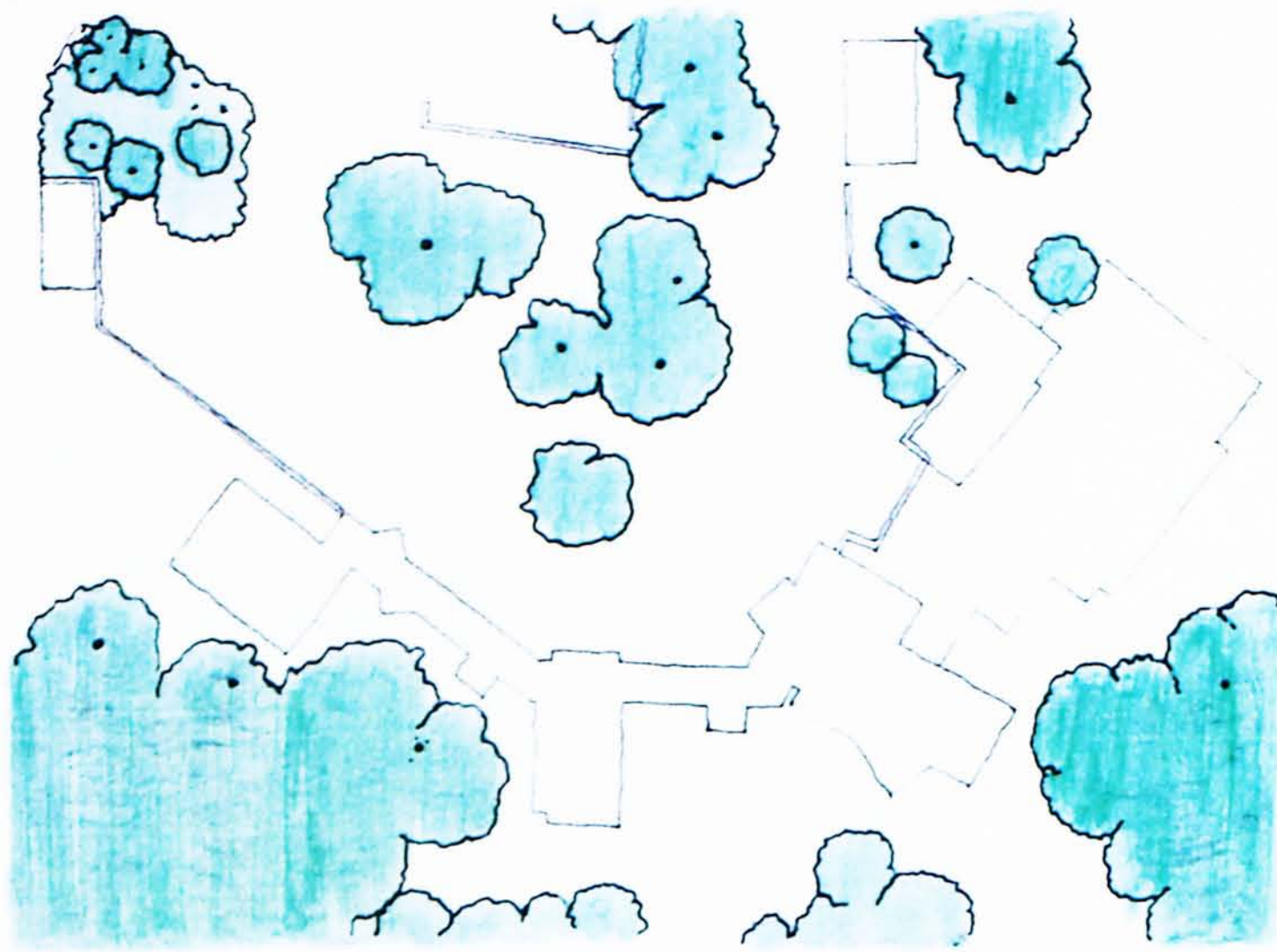
■ PEDESTRIAN WALKWAY
 --- VEHICLE ACCESS

0 5 10 20m

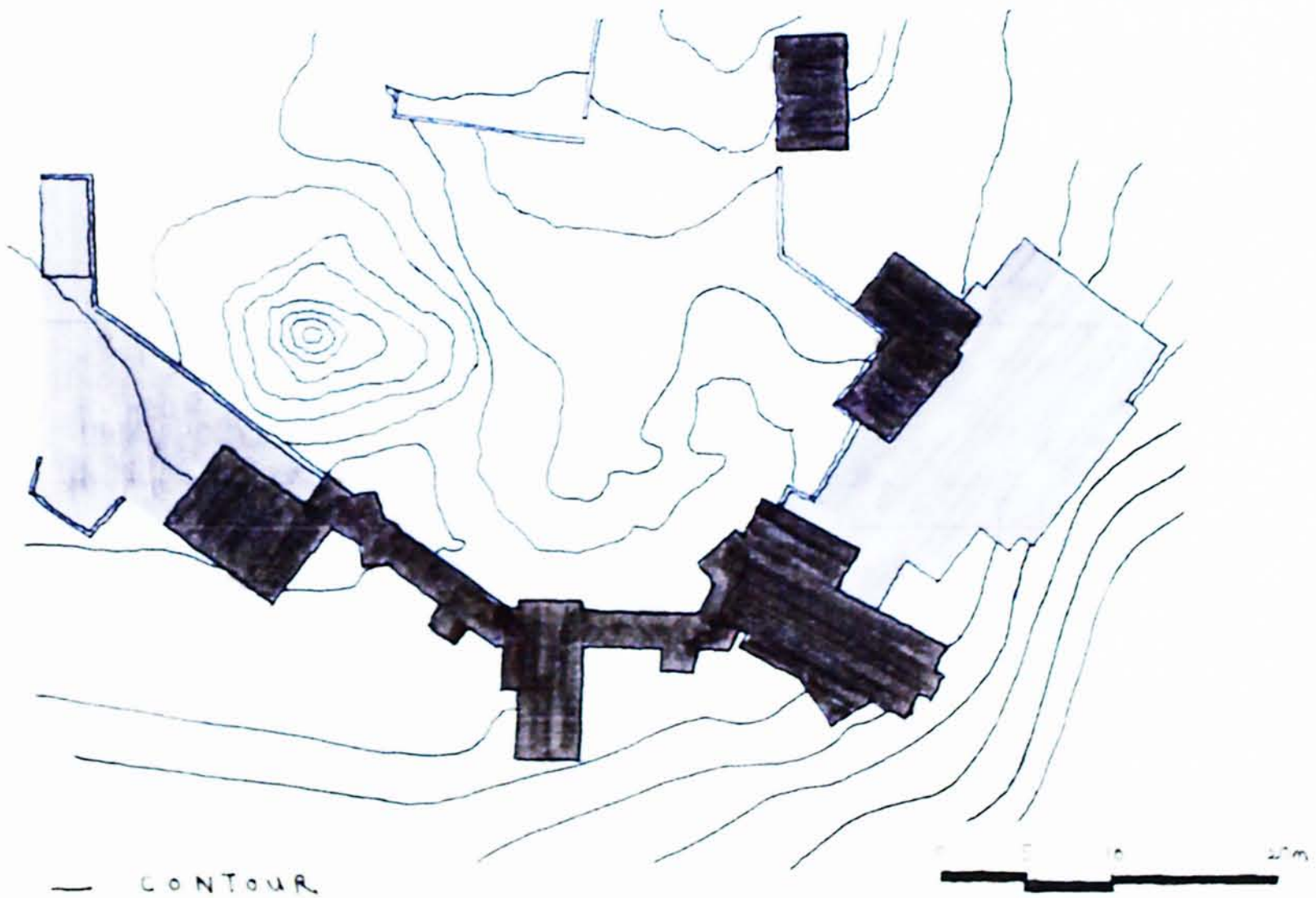
House Party, West Virginia, USA

- View from Interior to Exterior

- Circulation Pattern



GREENARY



House Party, West Virginia, USA

- Greenary

- Building and Open Space Relationship

Part 4

Intervention

Site Selection



Cheung Sha, Lantau Island

Cheung Sha is located at the south of the Lantau Island facing the Sea. The site is selected of its high greenery feature and village quality.

The site is located between the two villages Cheung Sha Sheung Tsuen and Cheung Sha Ha Tsuen where one is on the hill and one is along the beach. Connection between the villages is not strong although they belong to the same local residence.

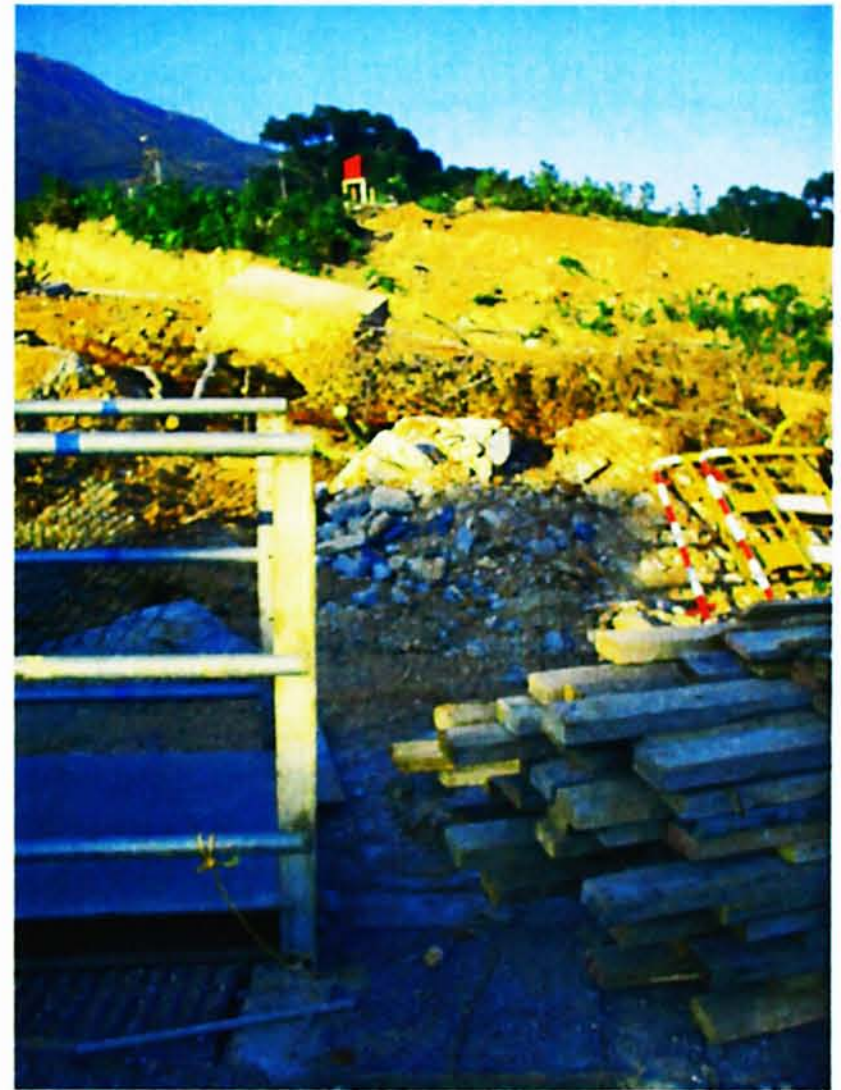
The site is covered mostly by agriculture land where half of them are not in use now. Residence would farm and sell the vegetable to the neighborhood.



Cheung Sha, Lantau Island

- Aerial Photo of Cheung Sha

- Infra-red Aerial Photo showing the greenery



Cheung Sha, Lantau Island

A construction site in Lantau Island showing the nature being destroyed



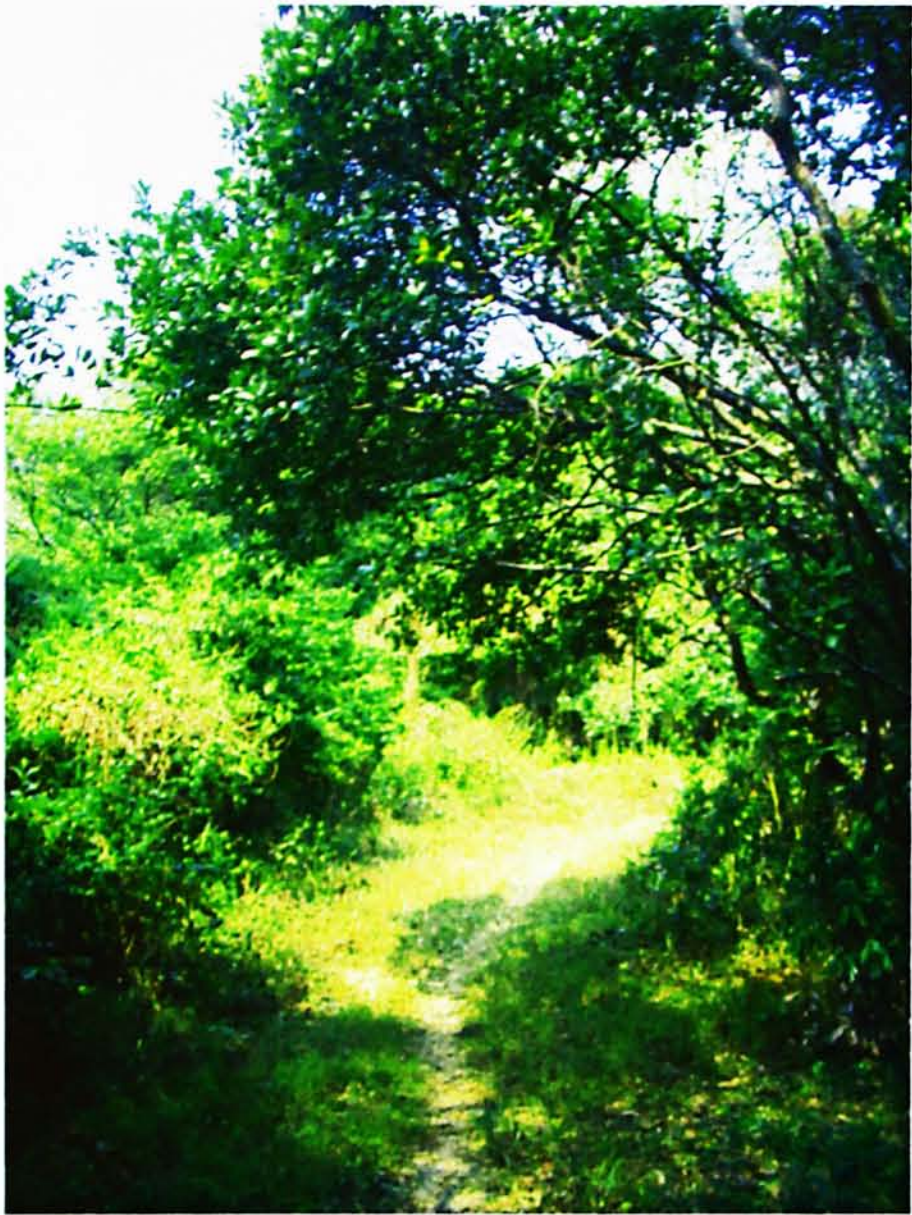
Cheung Sha, Lantau Island

Images of the Site



Cheung Sha, Lantau Island

Images of the Site



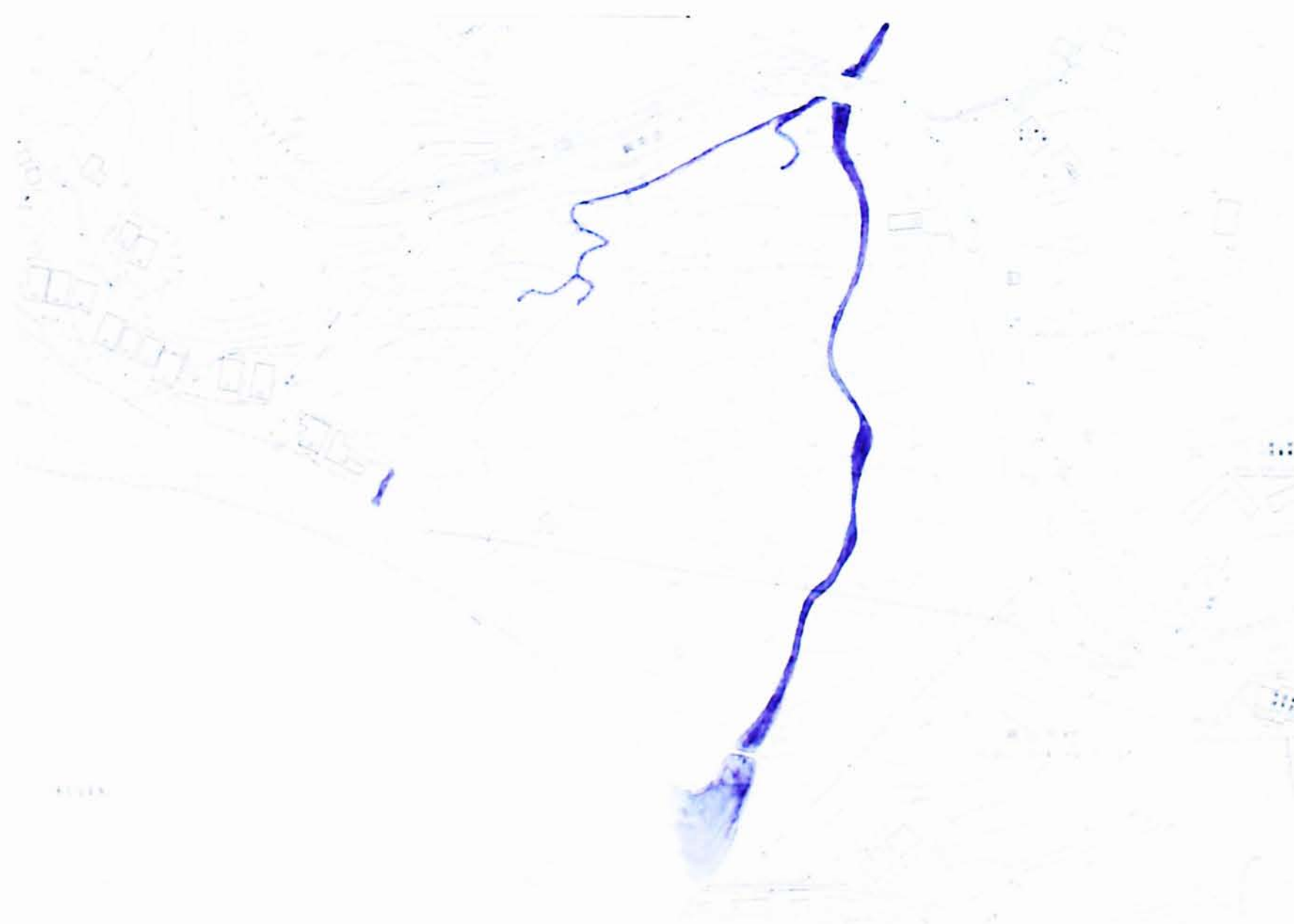
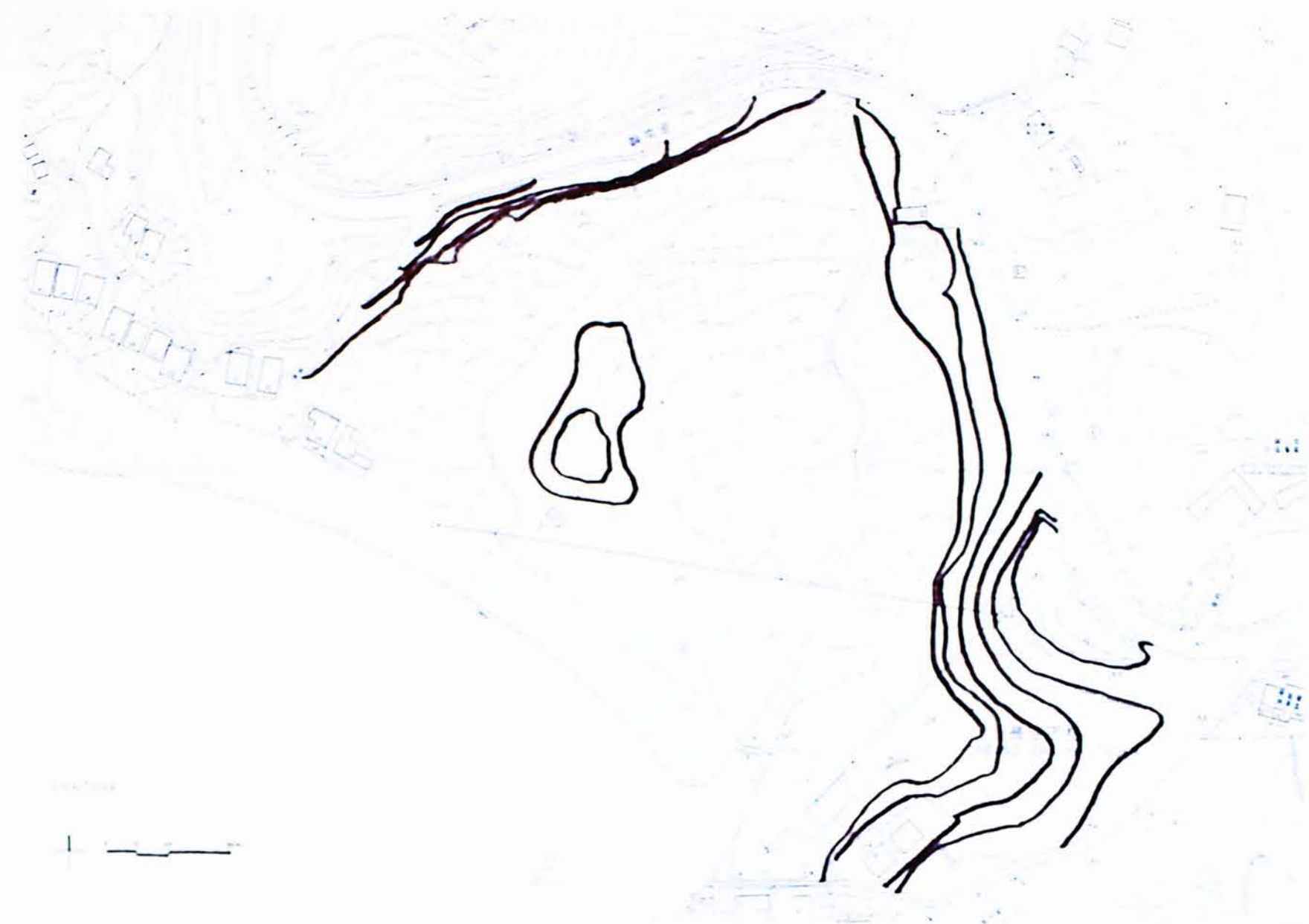
Cheung Sha, Lantau Island

Images of the Site



Cheung Sha, Lantau Island

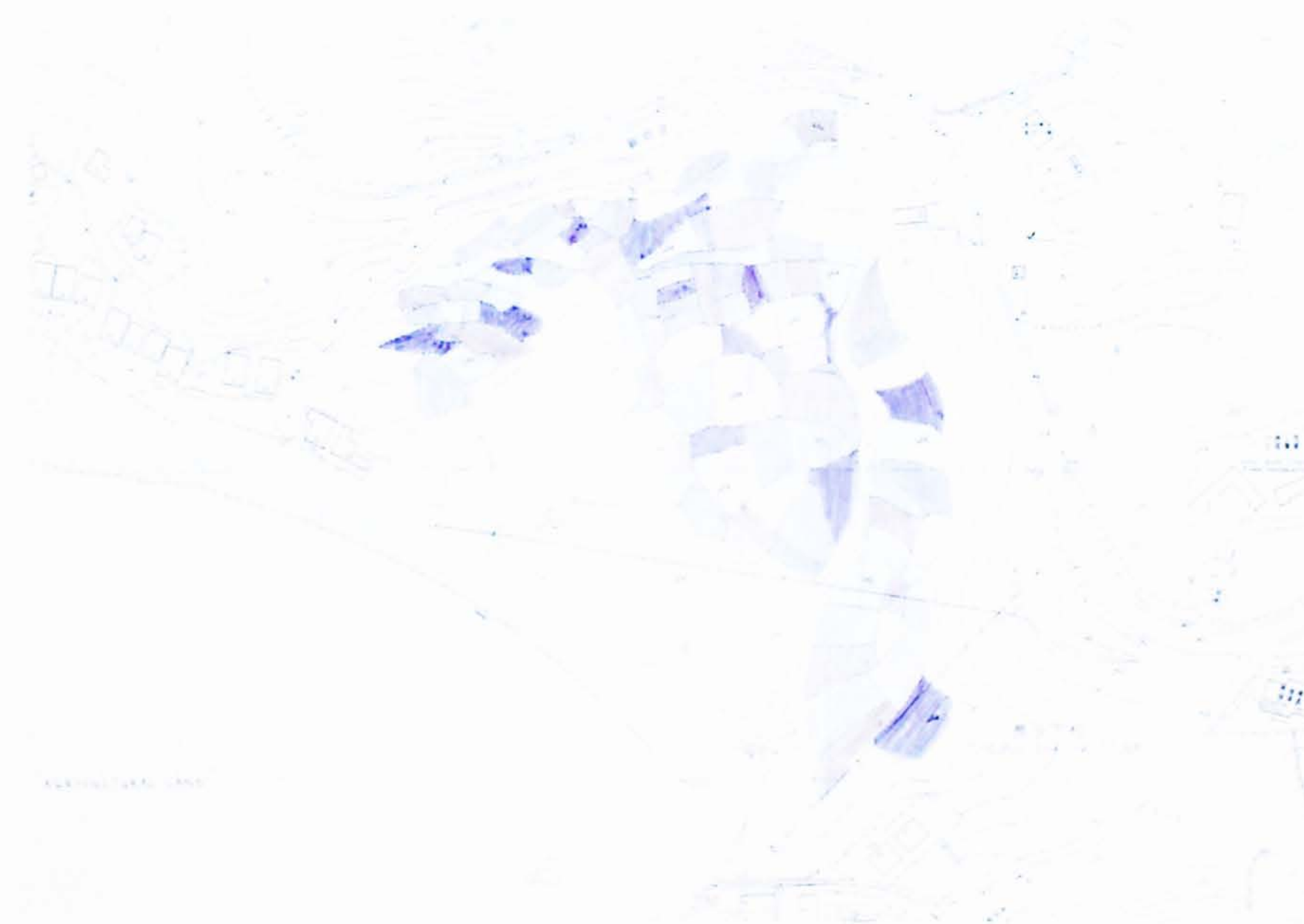
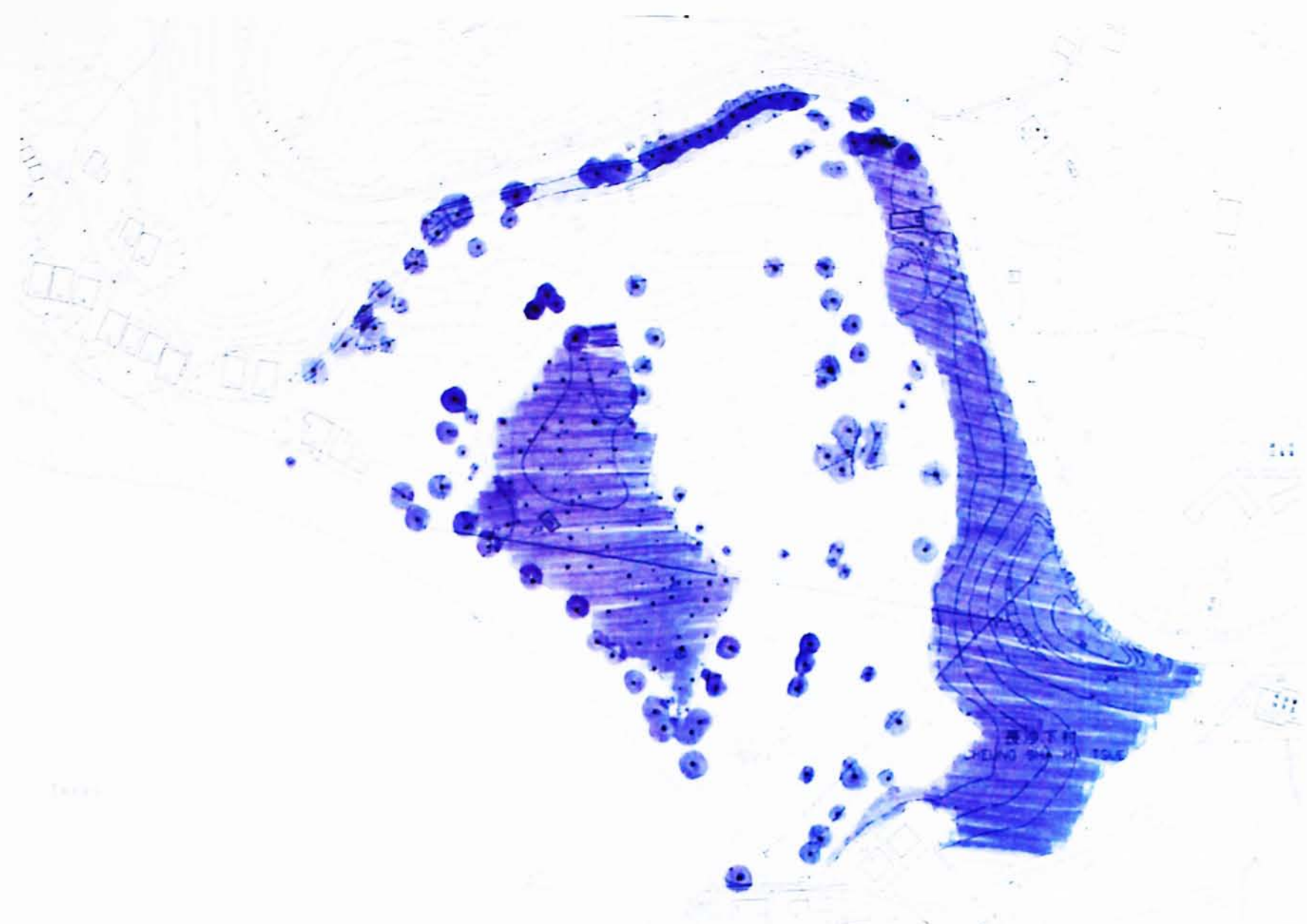
Spaces in the Forest



Cheung Sha, Lantau Island

- Contour of the site

- River of the site



Cheung Sha, Lantau Island

- Trees of the site

- Agricultural Land of the site



Cheung Sha, Lantau Island

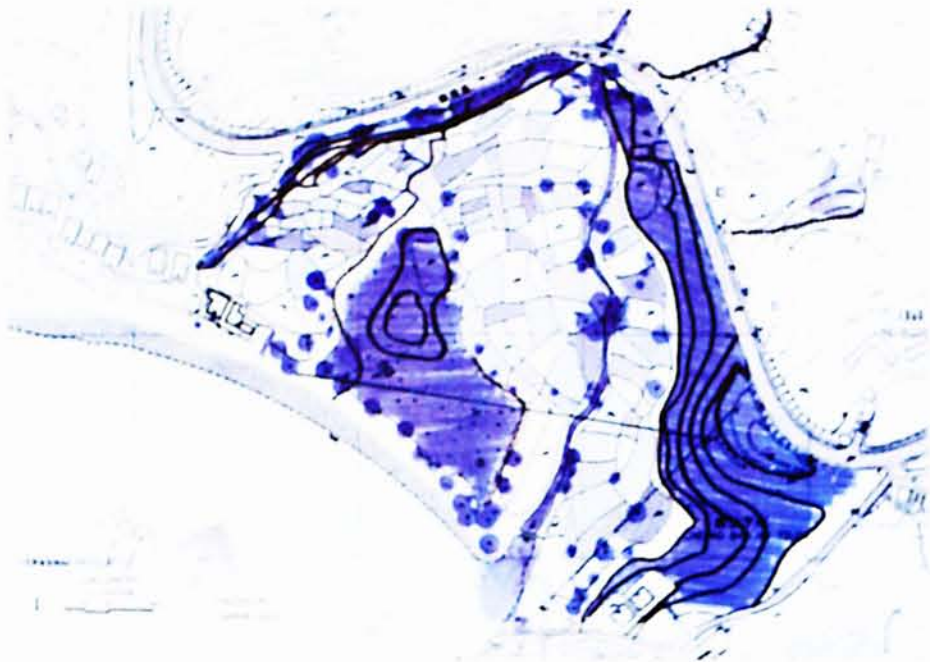
- Path of the site

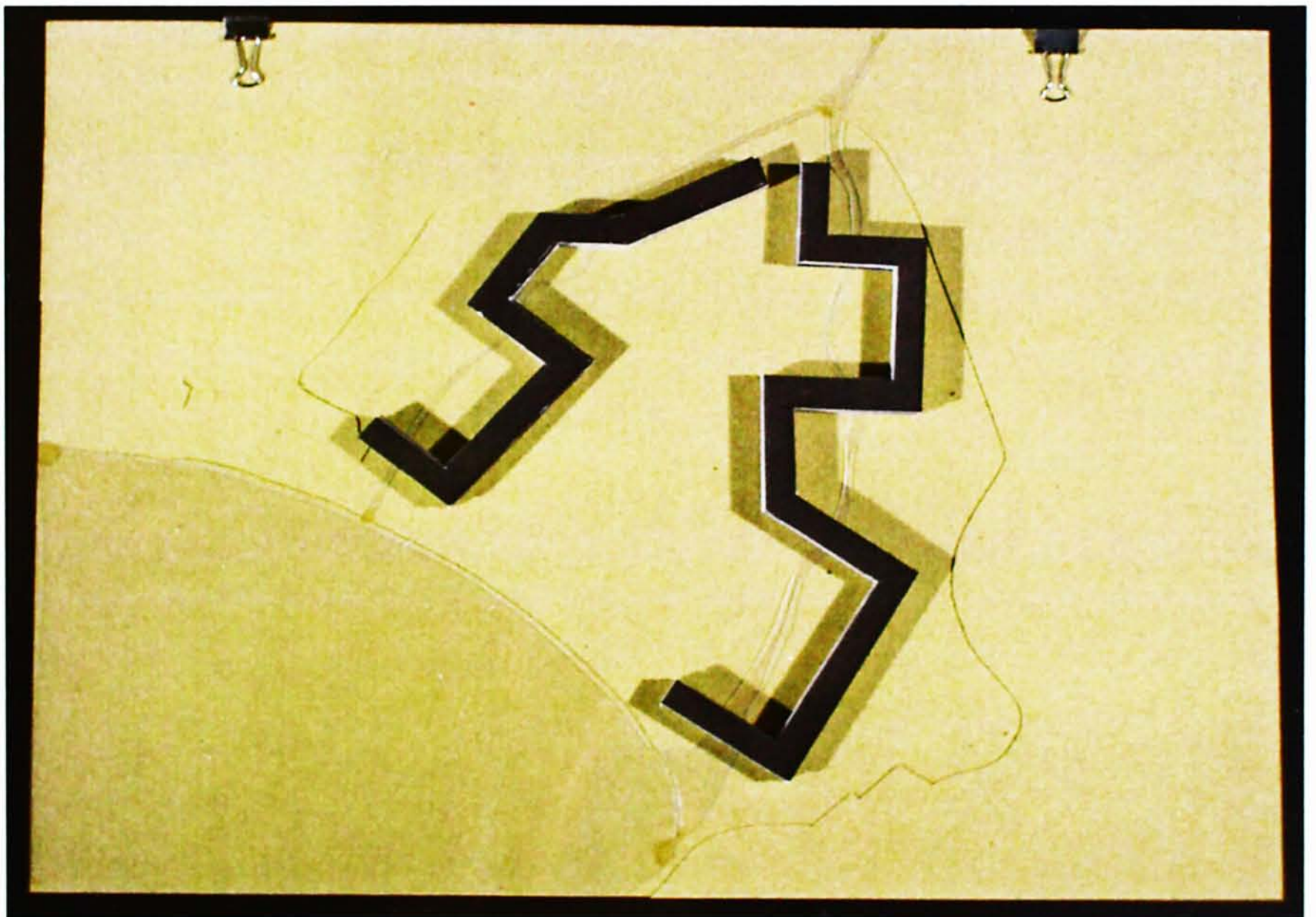
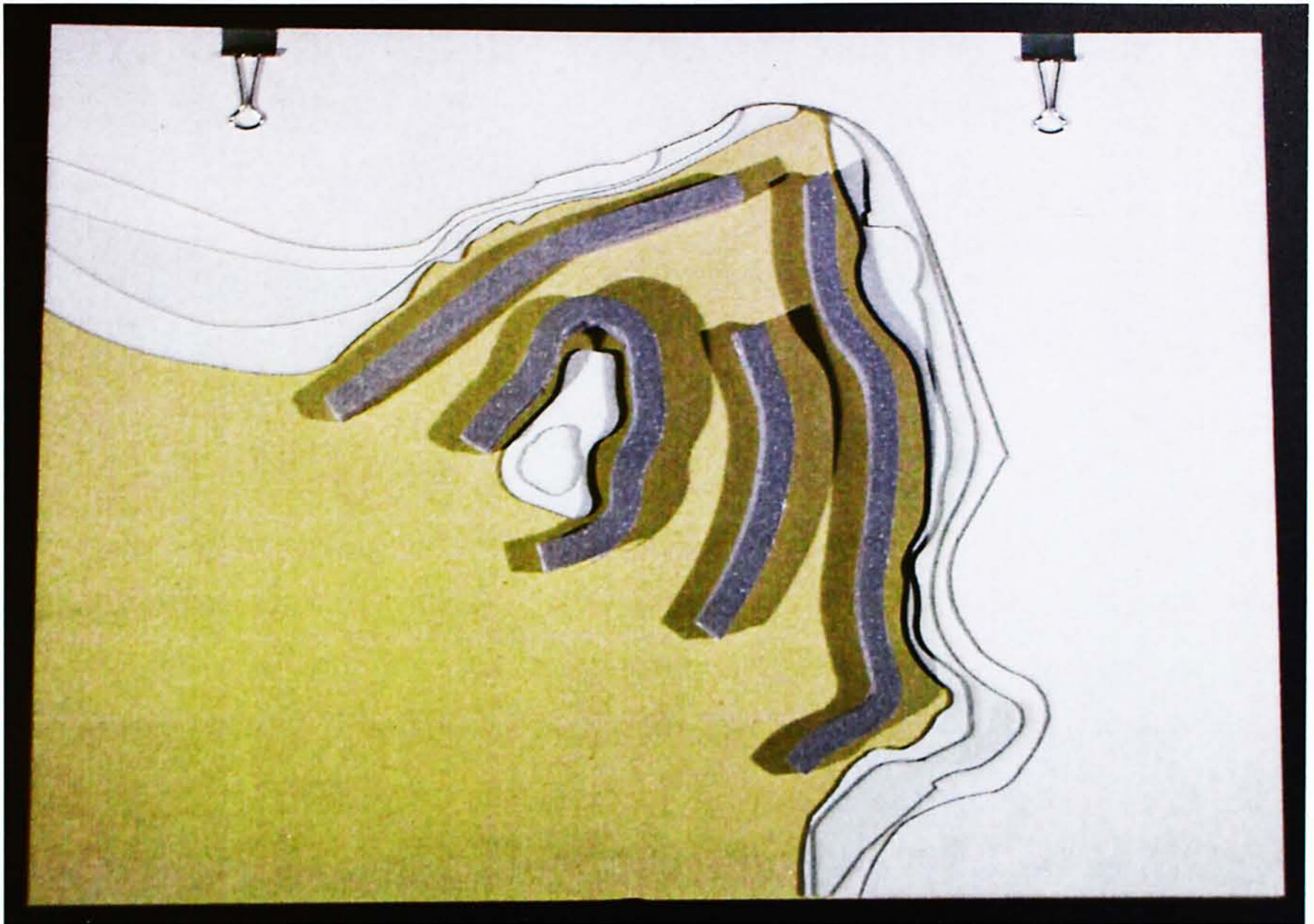
- Wind Pattern of the site

Design Methodology

The design methodology is based on the six natural elements as individual forces. The reference from the elements are considered separately in the early stage.

Since the references are too complicated and some of those have conflict to each other. One of the element - the agricultural landform was chosen as the major force of design. And other issues were considered in an additional method to work with each other.

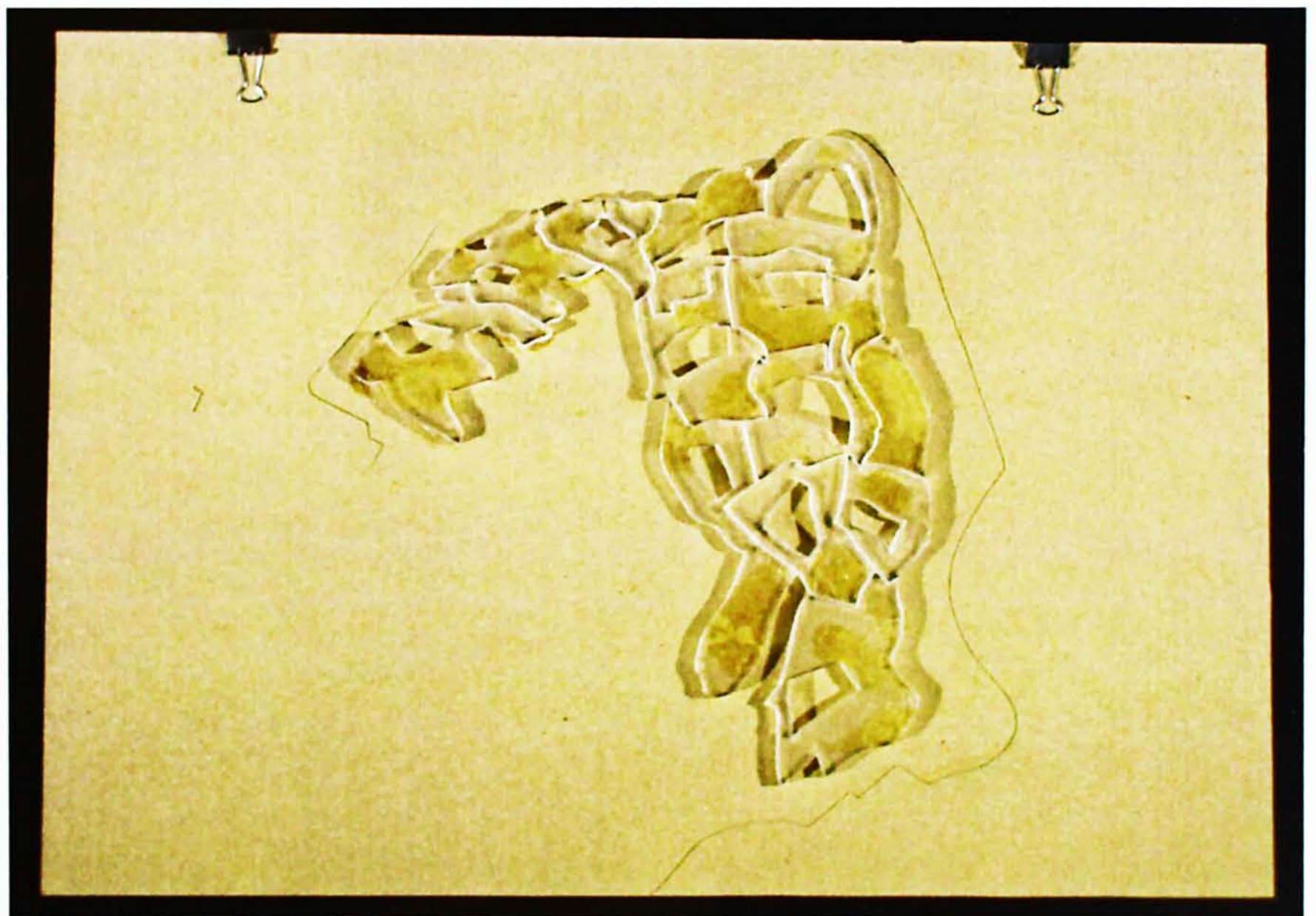
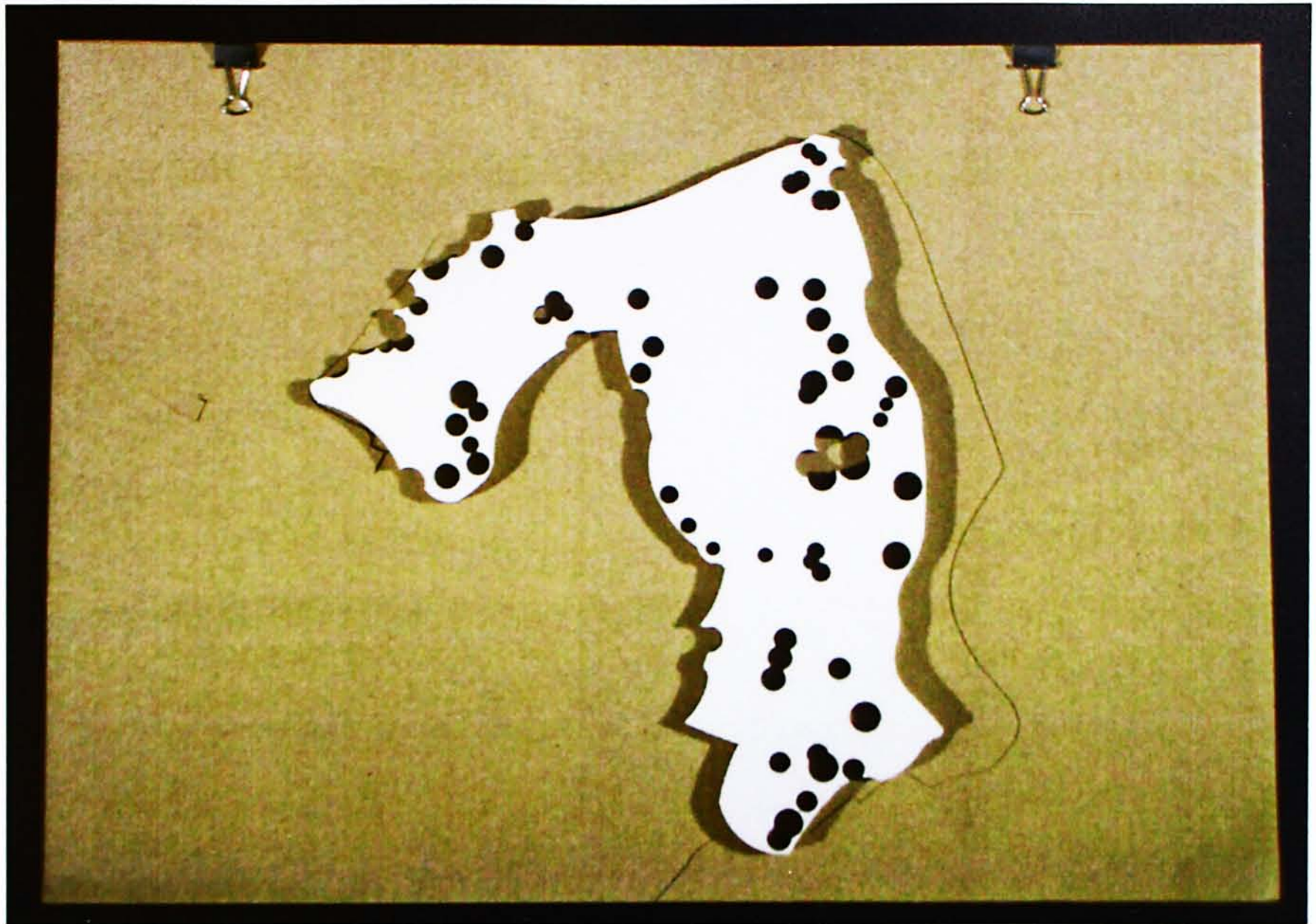




Cheung Sha, Lantau Island

- Design Intervention from Contour

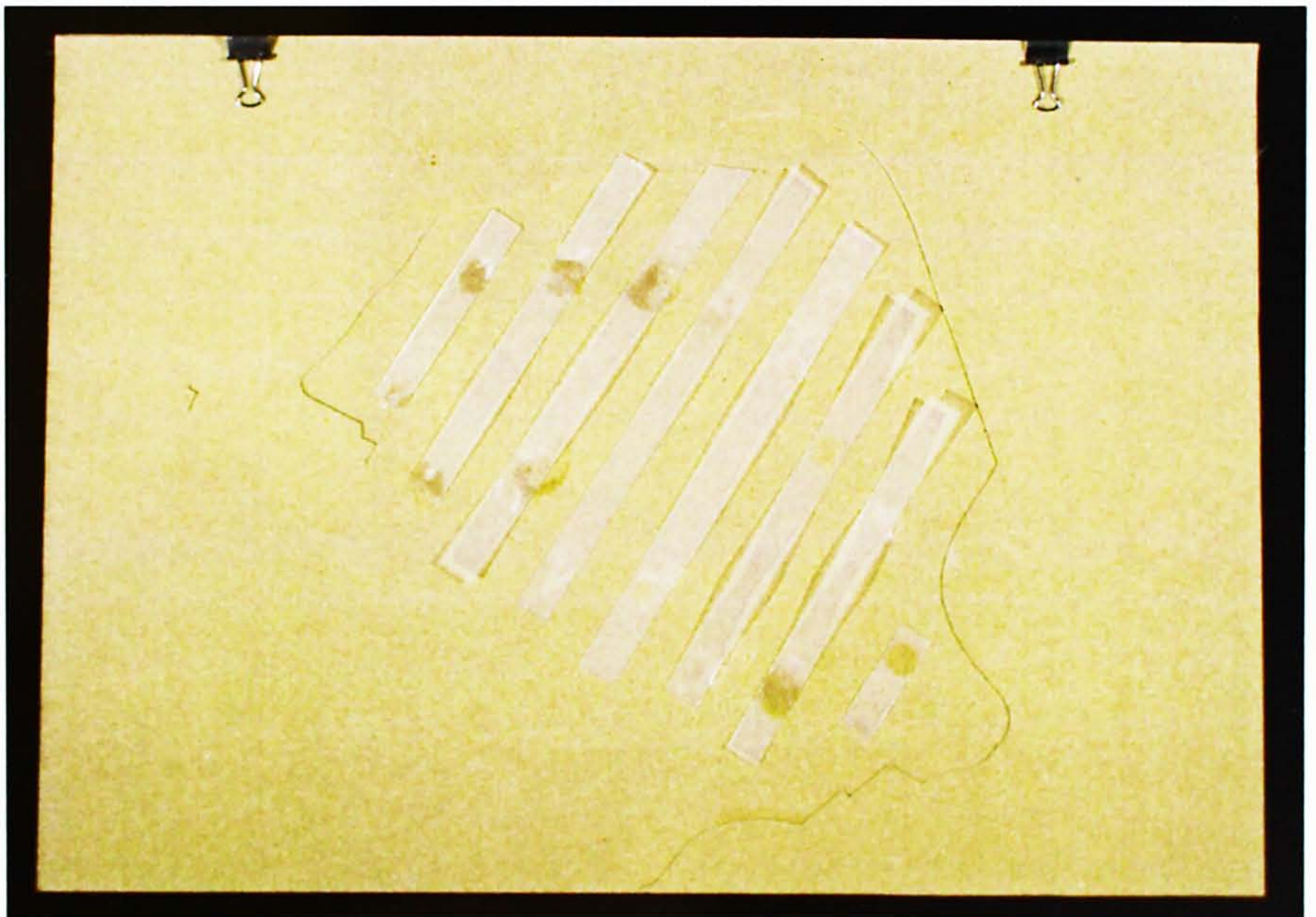
- Design Intervention from River



Cheung Sha, Lantau Island

- Design Intervention from Trees

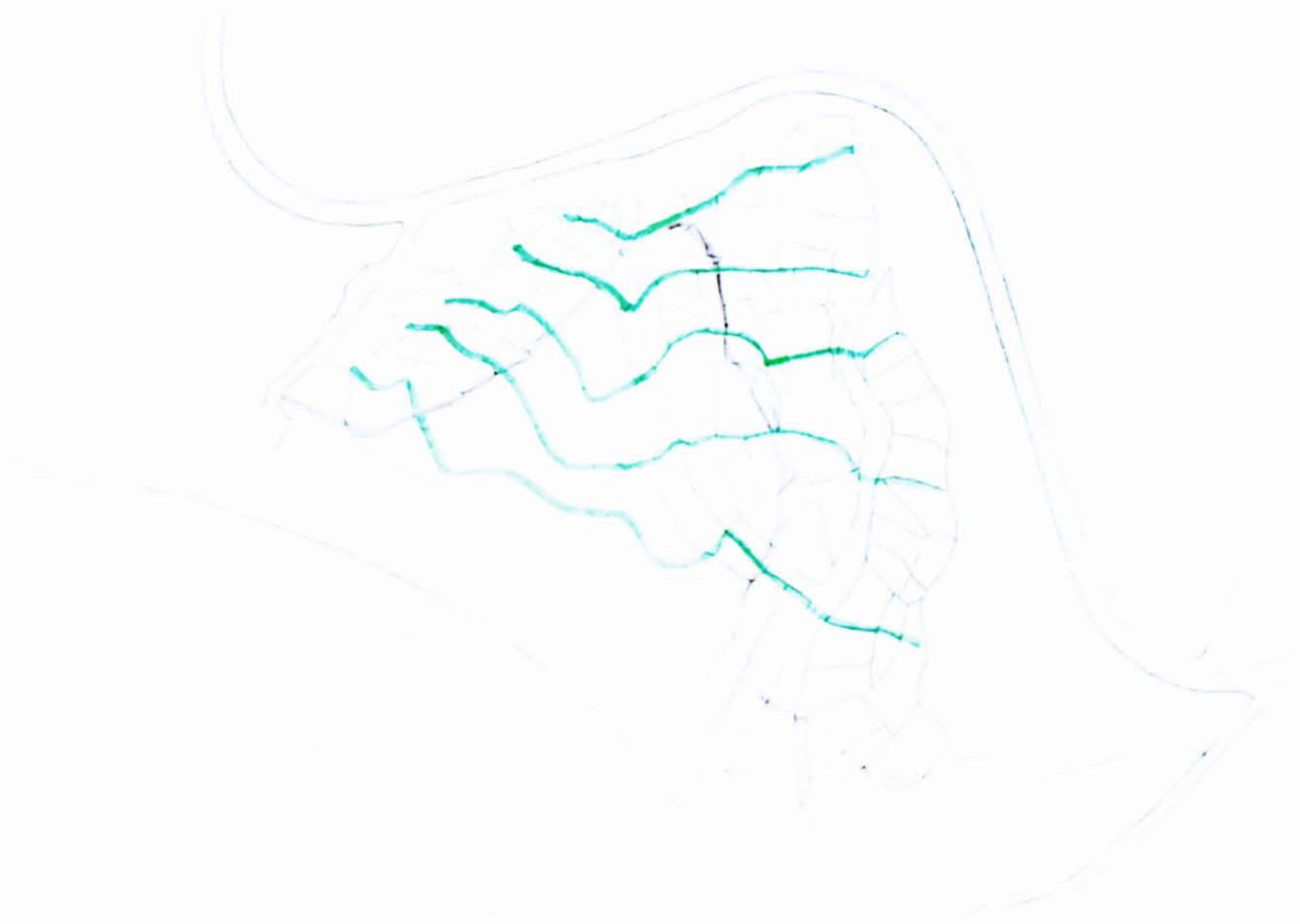
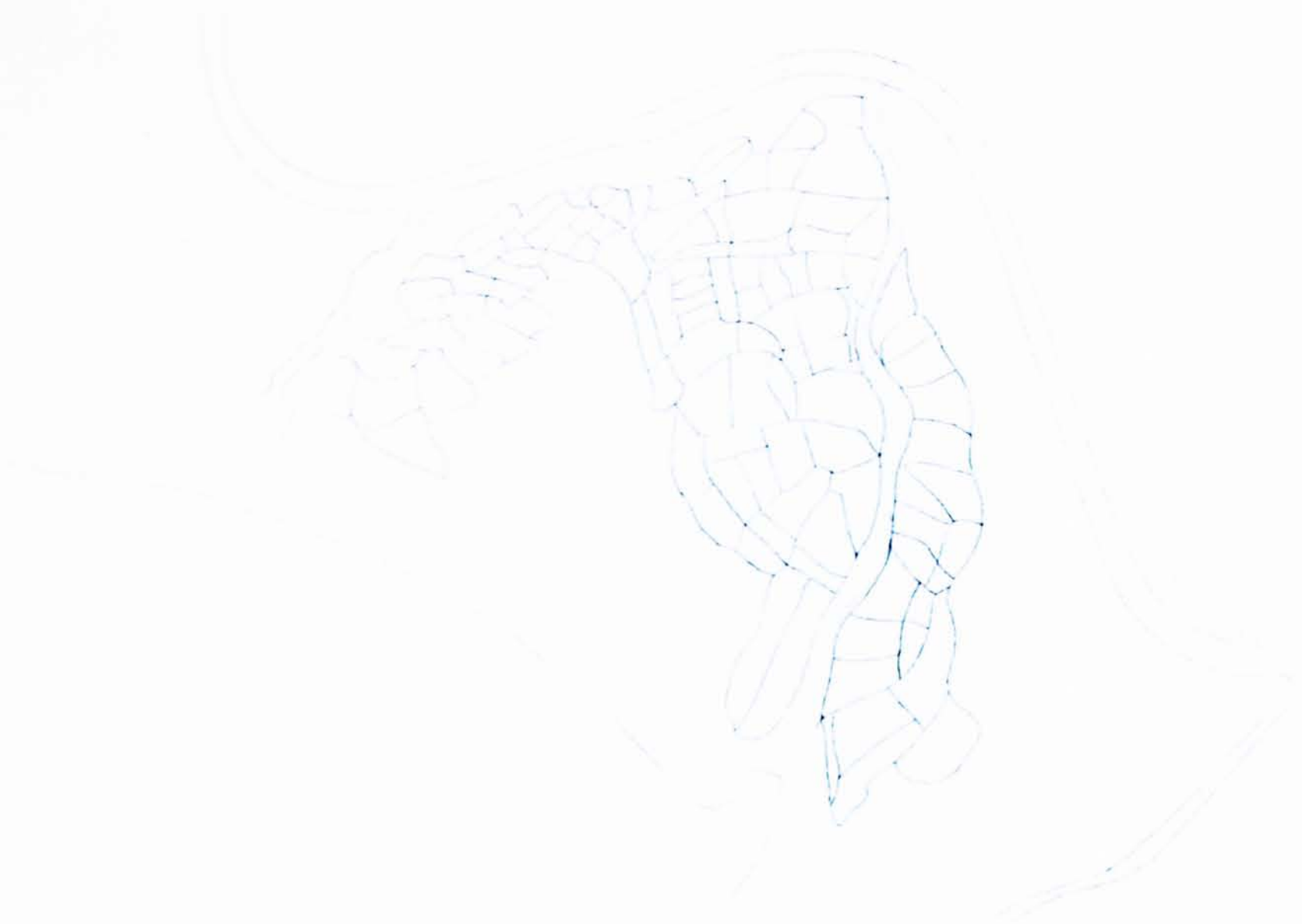
- Design Intervention from
Agricultural Land



Cheung Sha, Lantau Island

- Design Intervention from Path

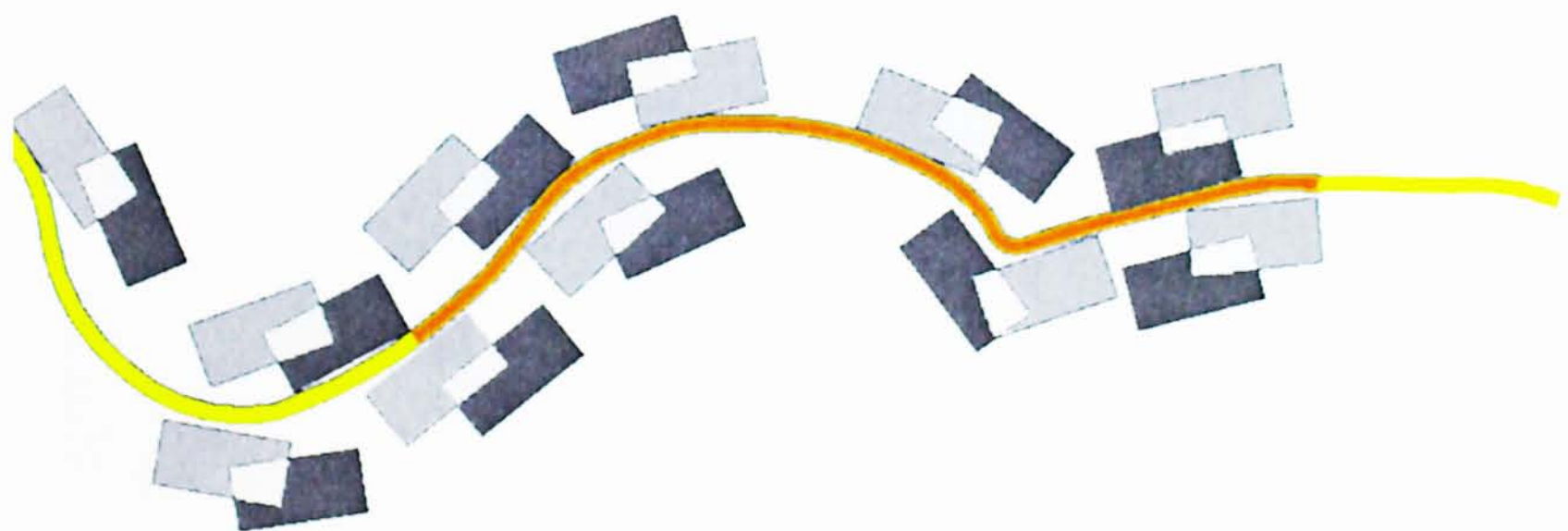
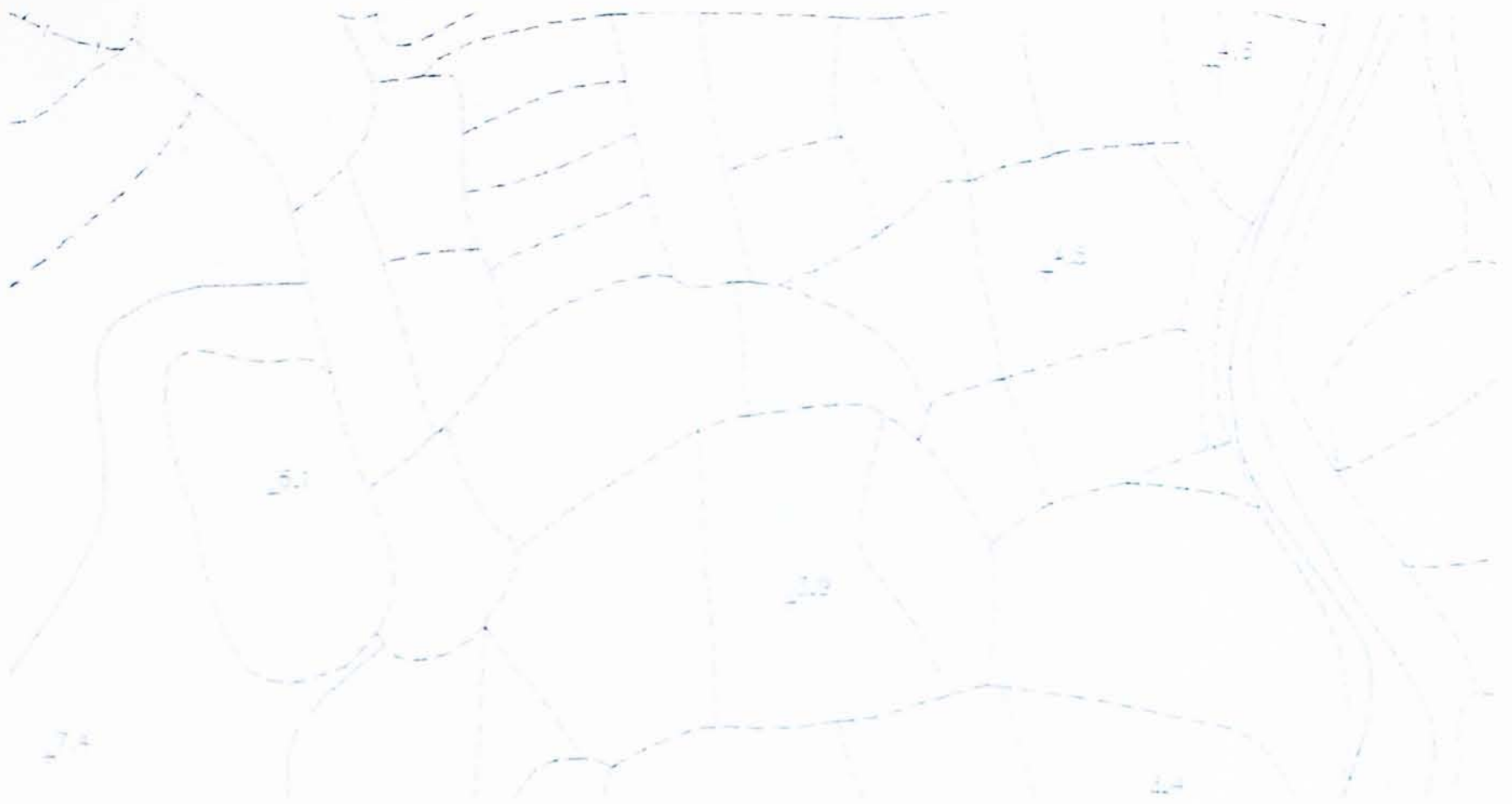
- Design Intervention from Wind Pattern



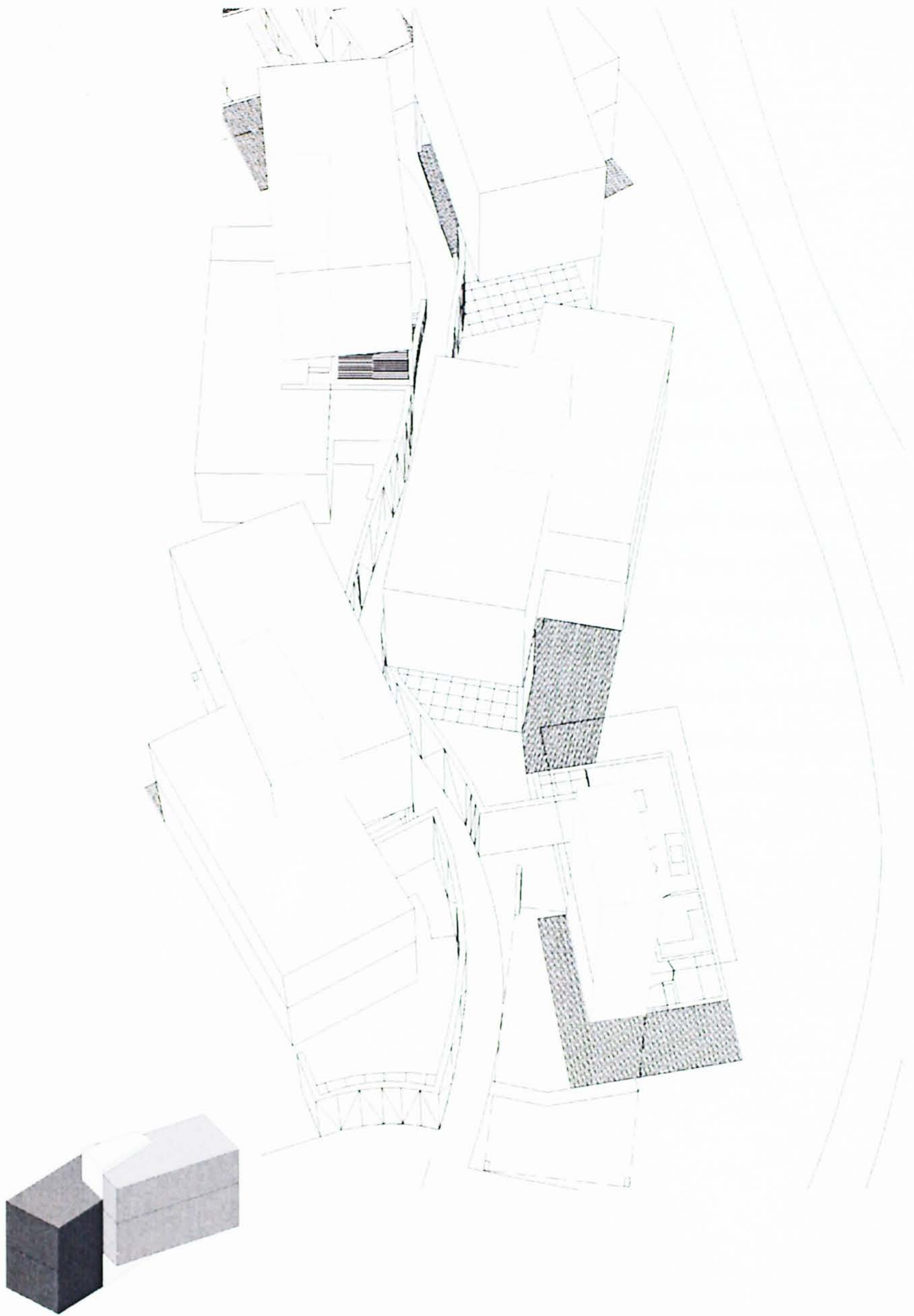
Cheung Sha, Lantau Island

- Agricultural Land form

- Design from the Landform into
Garden Path & Village Path



Cheung Sha, Lantau Island - Design with the agricultural land



Cheung Sha, Lantau Island

- Housing design with the curve

Design Demonstration

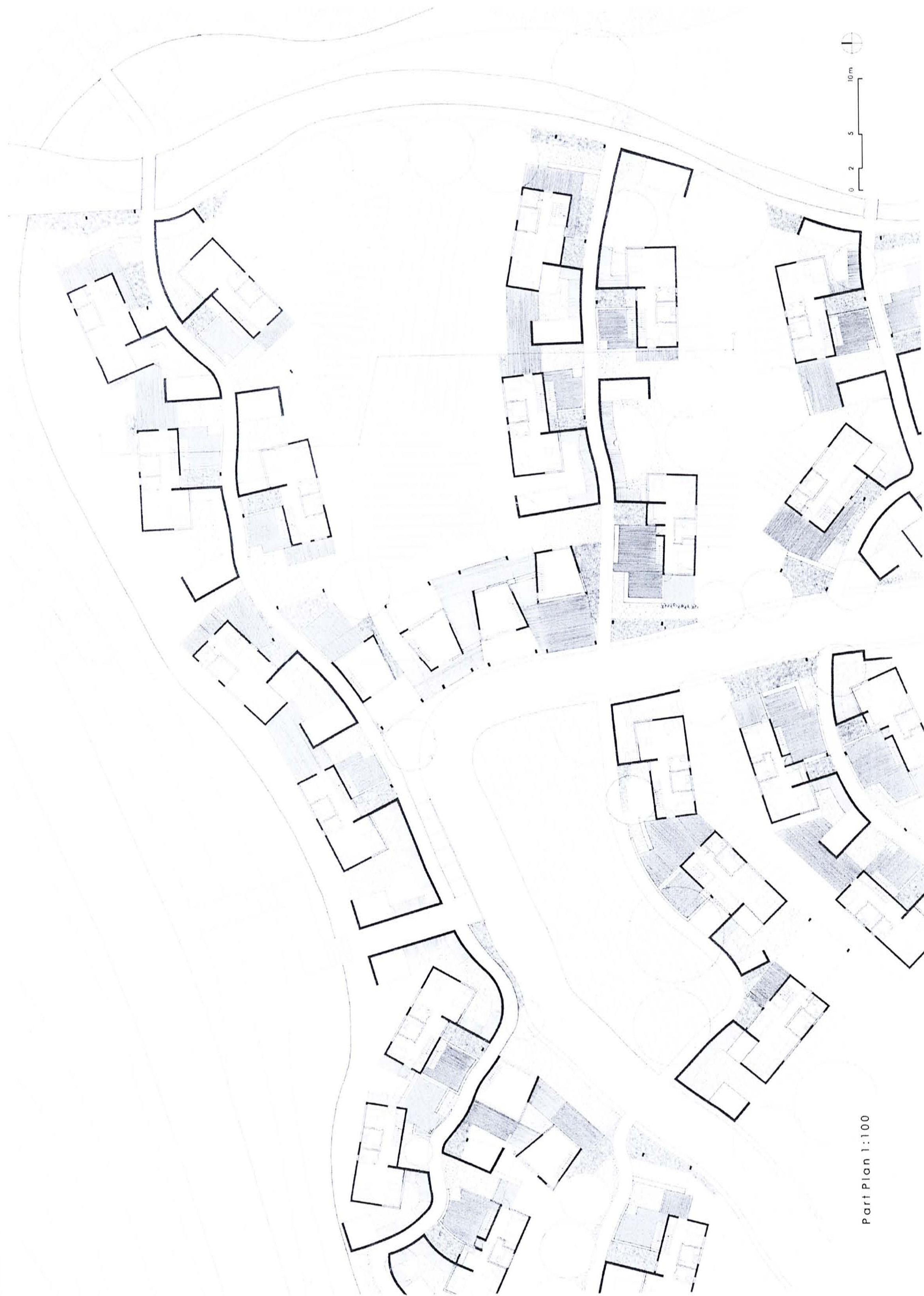


At the planning stage, the houses were mainly designed along the garden path. All the trees were preserved by locating them into the specific language of the housing design. Public open spaces and private gardens are integrated into the design so as to maximize the contact between the residence and the greenery. The village path were designed to connect the local district into the development with a plaza located in the middle, where the village path and the garden path interlock with each other to create the point of centre.



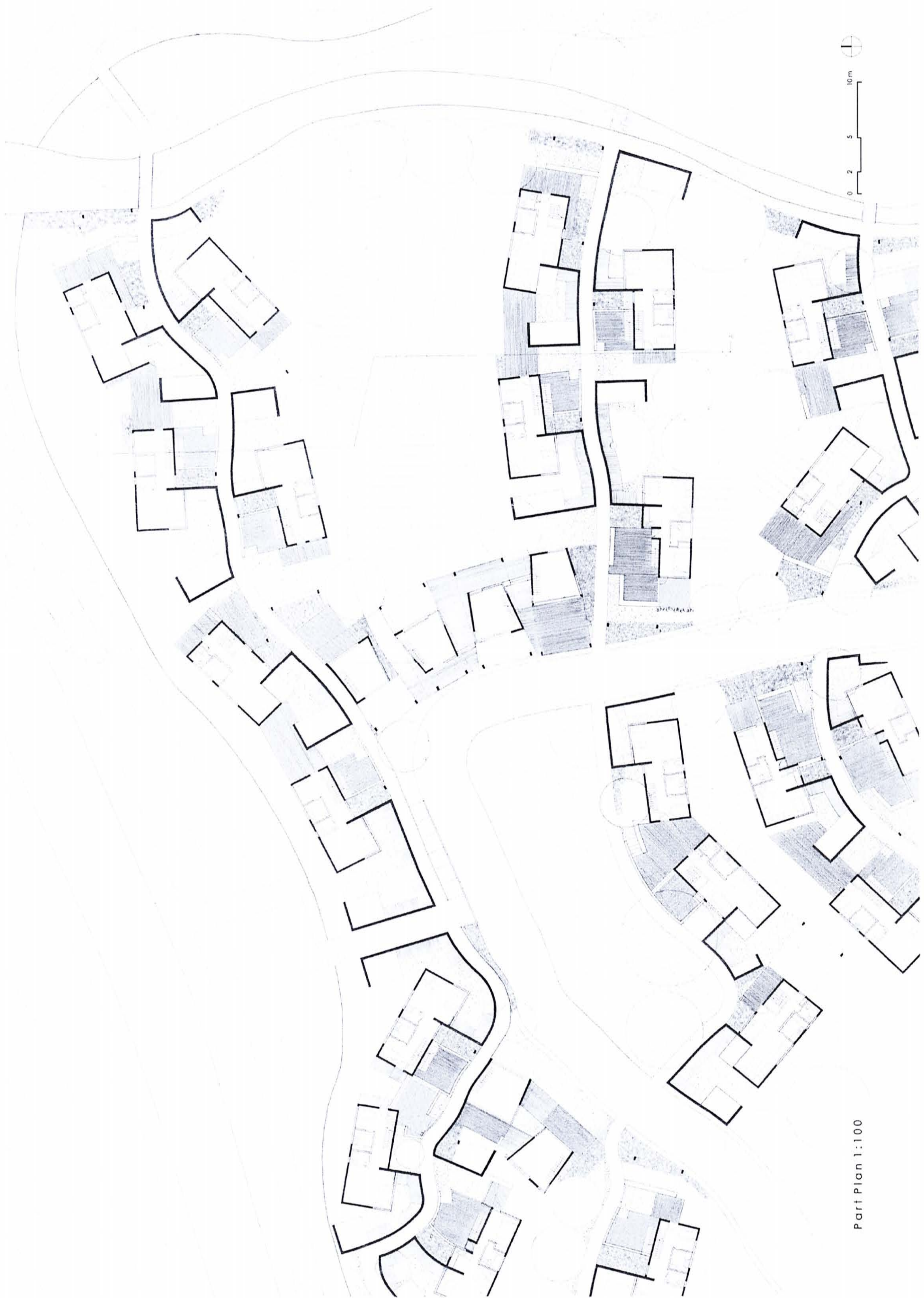
Site Plan 1:500

Cheung Sha, Lantau Island Plan



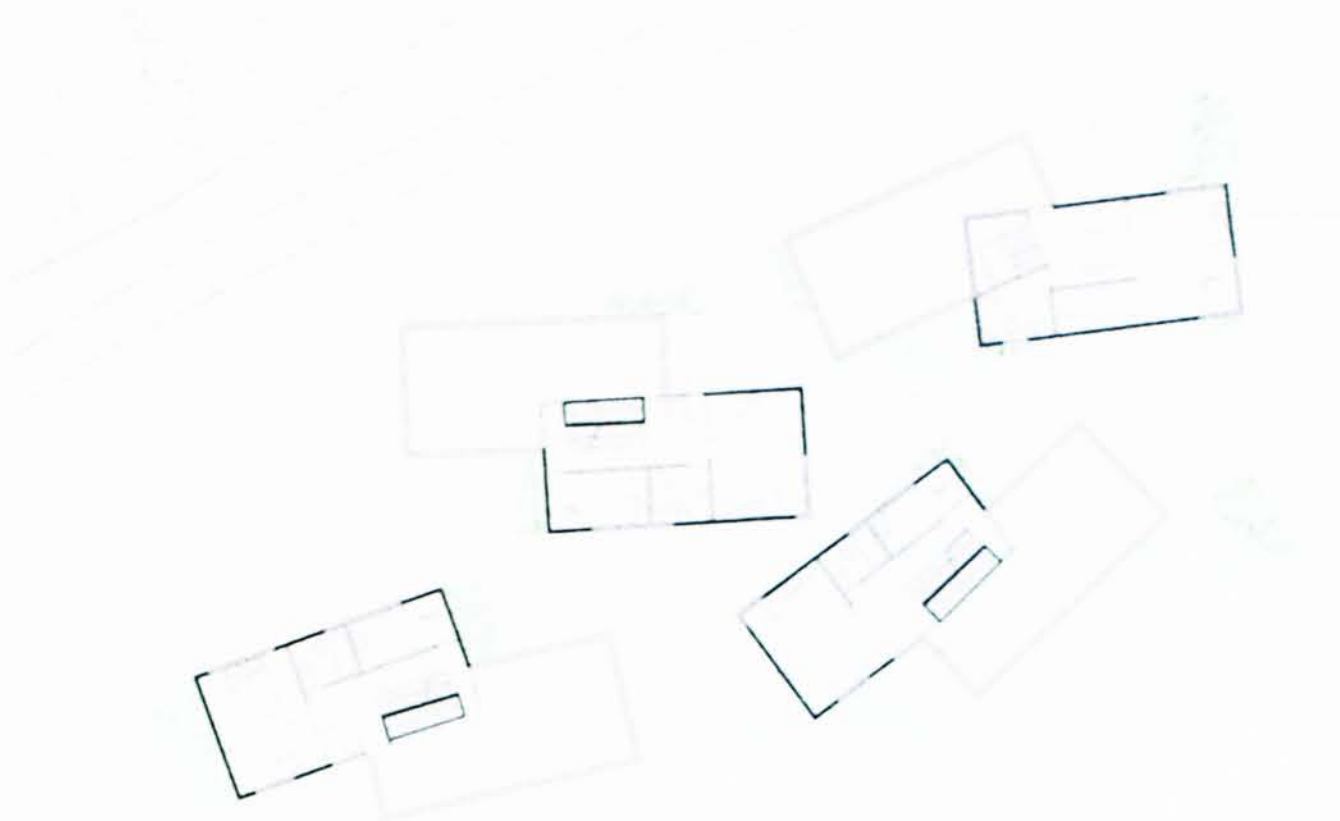
Part Plan 1:100

Cheung Sha, Lantau Island Part-Plan

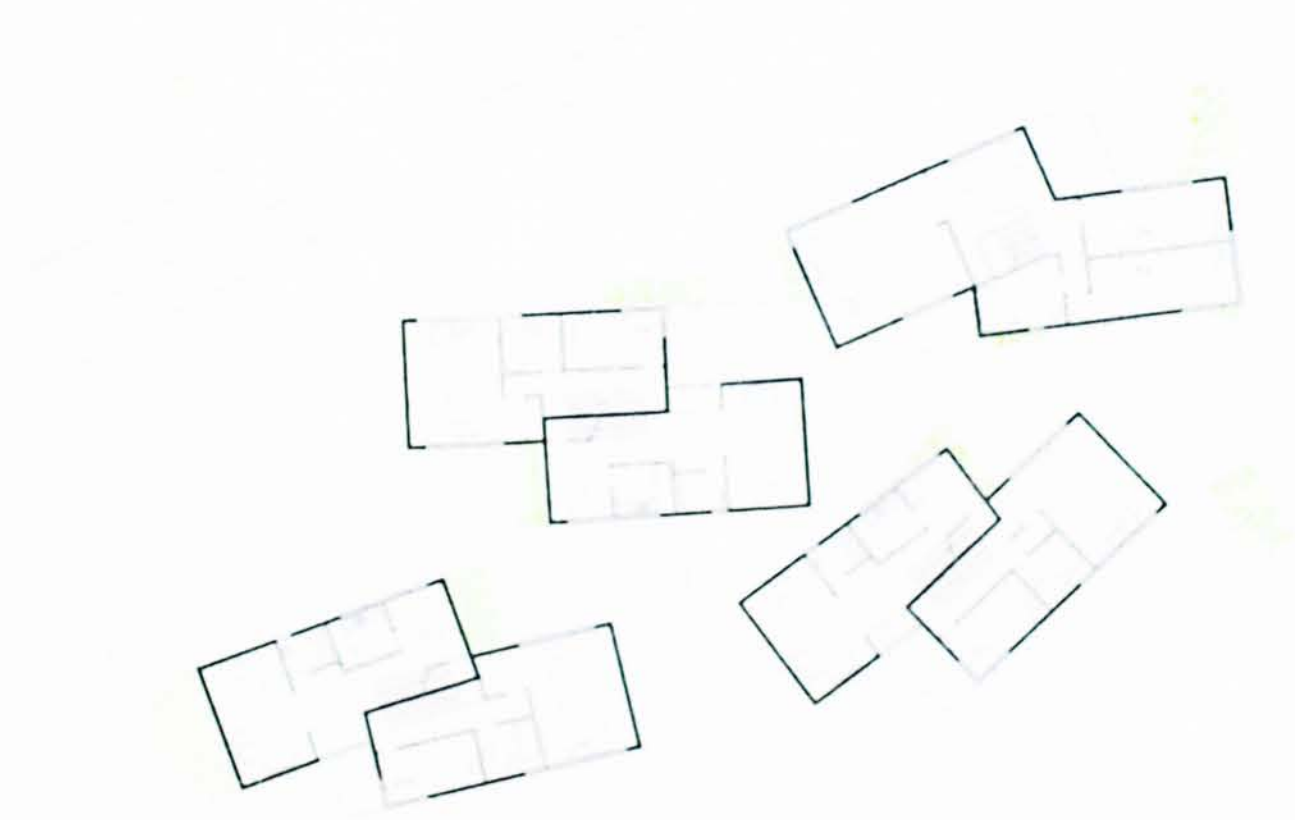


Part Plan 1:100

Cheung Sha, Lantau Island Section



Second Floor Plan 1:100



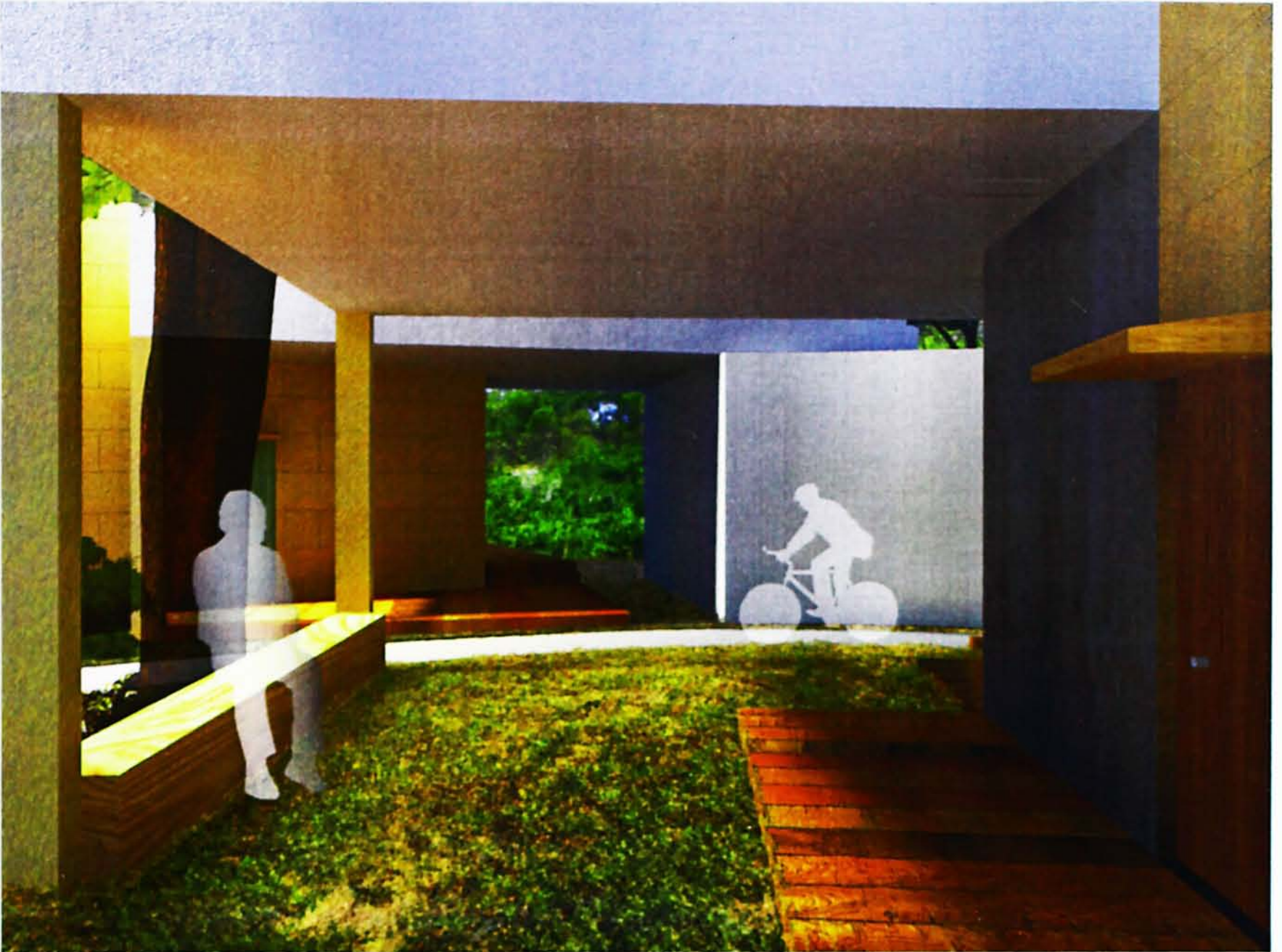
First Floor Plan 1:100

Cheung Sha, Lantau Island Part-Plan



Cheung Sha, Lantau Island

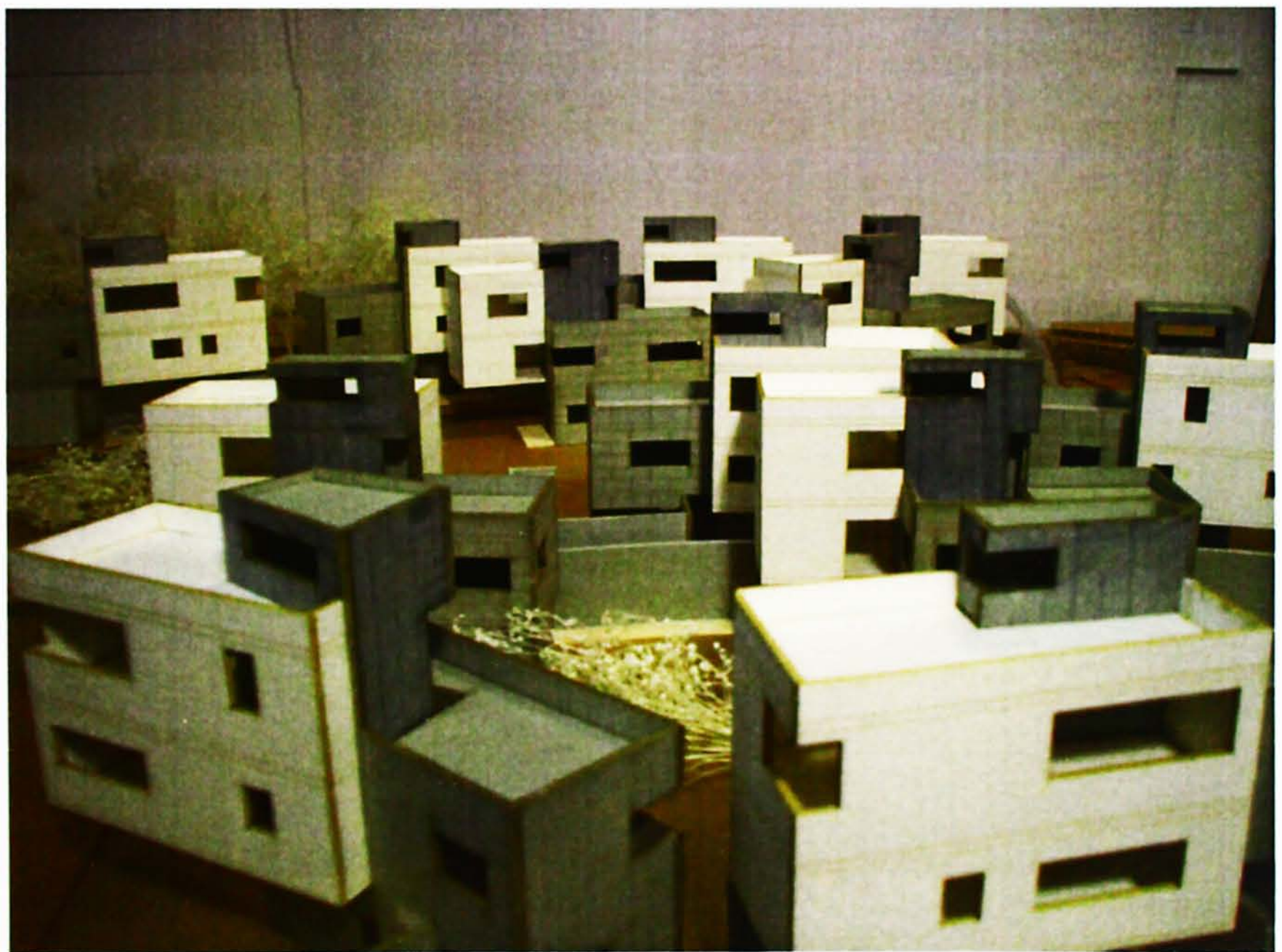
Wall Section



Cheung Sha, Lantau Island Perspectives

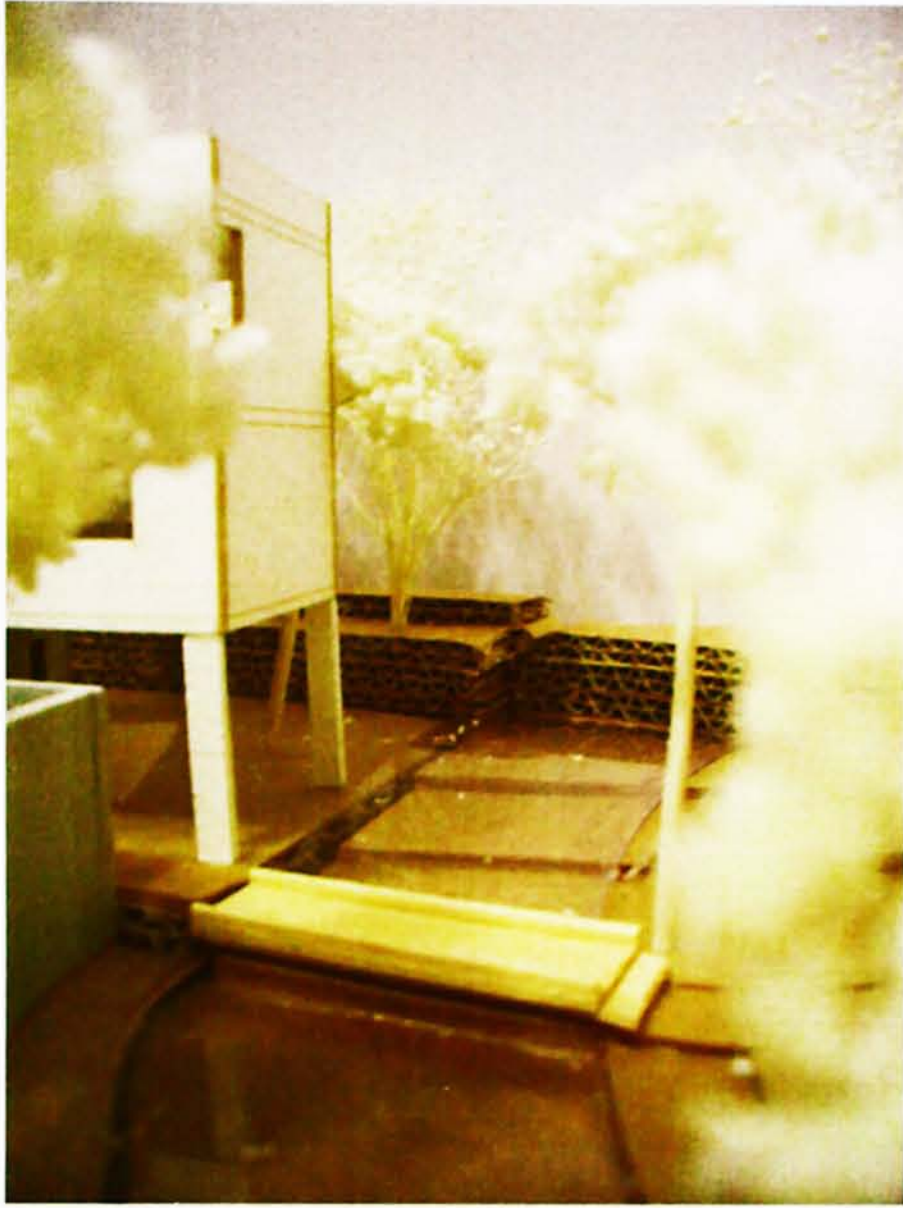


Cheung Sha, Lantau Island Perspective



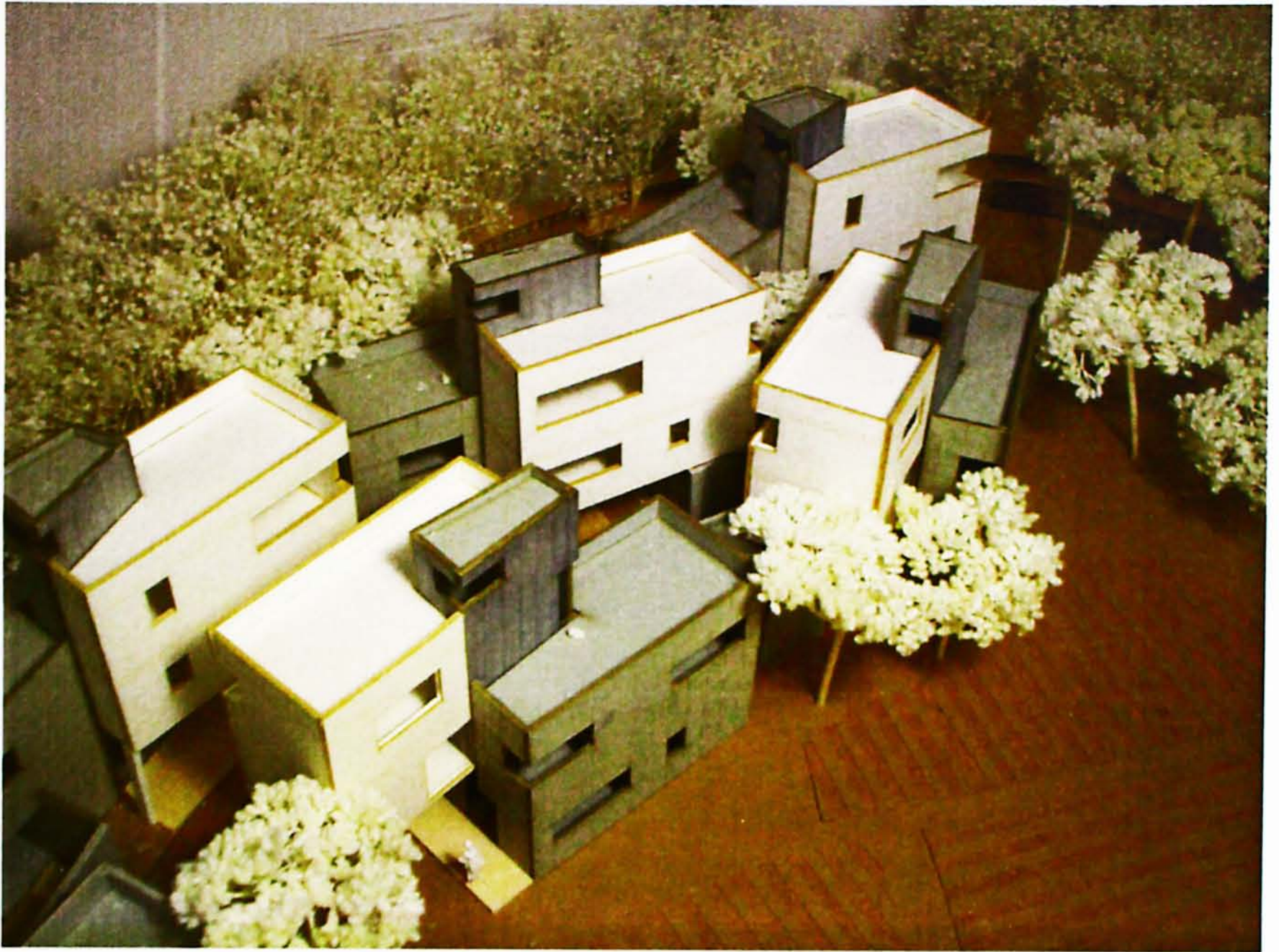
Cheung Sha, Lantau Island

Model Photos



Cheung Sha, Lantau Island

Model Photos



Cheung Sha, Lantau Island

Model Photos

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